An Investigation of Learning Styles Assessments and Educational Attainment among Hourly Employees and the Effects on Employee Engagement and Retention

by

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Abstract

Employee engagement and retention are two areas of focus within industry that help organizations assess business metrics such as training effectiveness, hiring practices, and workplace culture. Several methods exist with which to research engagement and retention levels within an organization and research to date has primarily focused on employee job satisfaction. There has been little research into the effectiveness of learning styles assessments and their contribution to employee engagement and retention. Other variables of interest, such as one's highest level of educational attainment, should be considered when assessing engagement and retention data.

This study seeks to add to a growing field of research dedicated to addressing employee engagement and retention in industries that suffer from low levels of both variables. A theoretical framework which utilizes Person-Organization fit and Adaptation-Innovation theory was used as the basis for explaining how an organization can be successful with maintaining an employee base that is engaged and dedicated to the organization. The major aspects of this framework addressed manager-employee relationships, andragogical approaches within a training department, and the humanist learning theory.

The instruments used during the course of this study exhibited reliability and validity when assessing levels of employee engagement and retention. Subsequent statistical analyses displayed relationships between the use of learning styles assessments and employee engagement and retention. Relationships between one's highest level of education and the level of engagement they felt towards the organization were also displayed and yielded valuable

information that can help the teleconferencing industry, as well as other industries, develop more effective training programs to help increase employee engagement and retention among hourly employees. This research will also help the industry focus on areas of concern as they attempt to create a working environment where engagement is strong and consistent resulting in strong retention numbers. As this research focused on employees who have been with a company for less than one year, this research will support training efforts directed towards new employees with the hope that they will choose to remain with the organization for a significant period of time.

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Table of Contents

List of Tables

List of Figures

List of Abbreviations

GED   General Education Diploma

HR   Human Resources

LSQ   Learning Styles Questionnaire

LTI   Learning Tactics Inventory

P-O Fit   Person-Organization Fit

ROI   Return on Investment

VARK   Visual, Aural, Read/Write, Kinesthetic

CHAPTER 1. INTRODUCTION

Employee engagement within the workplace increases individual productivity and bottom-line company success yet, according to data collected by Gallup (2013), "over 70% of American workers are not engaged or actively disengaged and are emotionally disconnected from their workplaces and less likely to be productive" (p. 12). Many factors within the workplace contribute to employee engagement which in turn increases employee retention leading to professional advancement opportunities for hourly employees within various industries. This research specifically focuses on the teleconferencing industry as this industry typically employs large numbers of hourly-paid employees and investigates the relationships between learning styles assessments, educational attainment, and employee engagement and retention.

Customer service training within the teleconferencing industry has been implemented in such a fashion that groups of newly hired employees are trained to complete basic job skills with little variation regarding types of training methods used. Often, newly hired hourly employees in this industry who are hired for entry level work have little to no formal education beyond secondary education. According to Comrie and Murray (2009), "technological advances and a global economy have fuelled demands for higher literacy and numeracy skills" (p. 1). Companies with a global reach, such as the teleconferencing industry, require new employees to have adequate literacy and technological skills that play an integral role in their training and ultimately, their job. Often, especially with older employees who could be seen as less trainable

based on their age (Gringart, Helmes, & Speelman, 2013), the workplace may be their first exposure to a formalized, technology-based training program.

Learning within the workplace is an important topic in and of itself as the workplace environment has different expectations than an employee's previous learning environment. Illeris (2011) describes workplace learning as an encounter between the workplace environment and the employee's learning potential. Learning potentials and learning styles are best assessed with the use a formal instrument in order to manage an employee's knowledge gaps regarding literacy, problem solving skills, and technological skills during their initial customer service training program. Without such instruments, questions and concerns may arise regarding the company's ability to provide adequate training to groups of individuals with varied, and sometimes limited, educational backgrounds. One's educational achievements may also play an integral part in how connected the employee feels to an organization.

Once an employee has completed training and is able to perform their job duties autonomously, the company must also consider incentives with which to increase the likelihood of employee engagement and retention. Lack of support from those who supervise the employee is detrimental to an employee's growth and length of employment. According to Kirmeyer and Dougherty (1988), "[Supervisor support] could ameliorate the effects of overload on emotional distress manifested as feelings of frustration, irritation, and tension" (p. 133). Together, the use and application of learning styles assessments along with continuous managerial support can reduce job abandonment and increase employee engagement.

Statement of Problem

Turnover among hourly employees in the teleconferencing industry is costly and Human Resource (HR) personnel must quickly replace former employees in order to maintain a strong

workforce. Recruiting new personnel is time consuming and expensive and once applicants are hired, trainers must then train new employees for several weeks before the employee is able to perform basic teleconferencing job duties. According to Milman (2003), "turnover costs are soaring and usually include separation costs, replacement costs, and training costs" (p. 18). Reasons why hourly employees leave a job (with or without a formal notice) vary but according to Doll (as cited in Mattox & Jinkerson, 2005, p. 424), a company's training program can play an important role in an employee's decision to stay with their employer. Based on attrition data maintained by the company where this research project took place, within one month, there were a total of 41 hourly employees who were released from employment (see Appendix A). Together, these employees acquired between one month and fourteen years of employment. Out of this group of former employees, 21 (63%) were employed for less than one year. According to fiscal data maintained by this company, it costs a training department approximately $13,000 (including the trainer's pay) to train a class of twelve newly hired, part-time hourly paid employees so they may perform the job skills of an entry level conference operator (see Appendix B). These data expose the investment an organization makes when preparing a new group of employees to become successful conference operators. Based on the expense of training, organizations suffer greatly when employees choose to leave the company after short-term employment.

In order to offset the expense of training new employees while fostering a sense of commitment to the organization, training programs must do more than simply train one to develop a set of job skills. An employee's learning styles should be assessed and appreciated by a training program so the employee feels as though their unique approach to new information plays a role in their professional development. Learning assessment tools allow trainers to gain

insight into the learning differences between newly-hired employees and how they process instruction and new information. These tools allow training programs to create cohesiveness between trainers, who are often seen as subject matter experts, and new employees who are seen as novices. Many assessment tools have been created with the sole purpose of understanding an individual's approach to instruction as well as their level of commitment to a company and of these, the Index of Learning Styles (ILS) and the Organizational Commitment Questionnaire (OCQ) are ideal assessments for newly hired employees and tenured employees. The ILS assesses learning preferences based on the Felder-Silverman learning style model. The ILS is administered online or on paper and a trainer can easily incorporate this instrument into a training agenda. Efforts to utilize a learning styles assessment in this particular environment (where this research took place) have been minimal at best, resulting in a one-size-fits-all approach. Surveys regarding one's commitment to an organization have not been used within this company and the OCQ is ideal due to its construct validity, the style with which questions are formatted, and the way in which it is scored. More information regarding the OCQ and will be included in Chapter 3.

Learning styles assessments can help trainers understand an employee's learning preference and trainers can then articulate this information to other trainers and management teams as needed. According to Schmeck (1988), "if we understand the styles of individual students, we can then anticipate their perceptions and subsequent behaviors, anticipate their misunderstandings, take advantage of their strengths, and avoid (or correct) their weaknesses" (p. 33). Understanding these individual styles creates open discussion between employees and their managers and removes incorrect assumptions management may have about employees who demonstrate questionable behavior or lack job performance abilities.

As information is derived from learning styles assessments completed by new employees, their progress can be tracked once they are established in their job role and are subsequently required to complete additional web-based or classroom training. Monitoring training performance through consistent contact with the employee creates an environment of support. As current research reflects, supportive environments create employees who are engaged in the organization and trust develops and strengthens between the employee and the organization resulting in higher levels of retention (Wang & Hsieh, 2013). Learning styles assessments can act as a foundation for building positive relationships and the absence of an assessment tool can lead to a disconnect between employees and an organization. This disconnect is the root cause of employee engagement and retention issues (Wang & Hsieh, 2013).

Purpose of Study

The purpose of this study was to expand upon existing research that delves into learning styles assessments and organizational commitment (Dalton, 1999; Fleming, 1987; Knowles, 1972; Kolb & Kolb, 1984; Maslow, 1943; Wechsler, 2008) and explore whether a teleconferencing company's assessment procedures can create an environment that is conducive for high levels of employee engagement and retention. An investigation was also completed to discover any possible relationships between educational attainment and employee engagement and employee retention. Data collected from this research will assist HR departments, training departments, and management teams to create best practices and alter working environments that are supportive and productive for employees who are new to the workforce and new to the company.

Research Questions

The following research questions were addressed:

1.	What is the relationship, if any, between the administration of learning styles assessments and employee engagement?

2.	What is the relationship, if any, between the administration of learning styles assessments and employee retention?

3.	What is the relationship, if any, between employee engagement and employee retention?

4.	What is the relationship, if any, between educational attainment and employee engagement?

5.	What is the relationship, if any, between educational attainment and employee retention?

Significance of the Study

Training programs within the teleconferencing industry are required to train large groups of newly-hired hourly employees to be able to perform basic teleconferencing job duties with minimal supervision. The standards for new employees are such that once their new hire training is complete, they are expected to utilize their new skill sets immediately with minimal errors. Trainers in the teleconferencing industry must develop an understanding of and appreciate the andragogical theories behind training techniques in order to account for the employees' needs and avoid instruction that is predominantly instructor-led (Craig, 1996).

Employees who enter the workforce with minimal education and minimal formal job training from previous employers often demonstrate the motivation to learn (Knowles, Holton, & Swanson, 2012) but can also become frustrated when the training content becomes too

challenging or is presented in such a manner that the application of the training content is questioned. This frustration can lead to lackluster job performance or job abandonment creating a cycle of recruiting new employees to replace those who left the company (willingly or unwillingly). This study is intended to provide workforce-based information to this industry in order to increase employee engagement and retention while exploring the benefits of learning styles assessments and organizational commitment surveys.

Based on current research, it is hypothesized that there will be a strong correlation between employee engagement and employee retention. It is also hypothesized that a strong correlation will exist between one's educational attainment and engagement yet a weak correlation will exist between one's educational attainment and retention. It is hypothesized that a positive relationship will exist between the administration of learning styles assessments and employee engagement but a negative relationship will be discovered between the administration of learning styles assessments and employee retention due to factors that influence an employee to seek employment elsewhere such as a change in their demographics or their ability to seek other employment offers that may be more lucrative or that may have a more flexible schedule. Factors such as absenteeism and job performance issues can also contribute to poor retention numbers and these factors are included as limitations of this study.

Limitations of the Study

The participants of this investigation were employees of a teleconferencing company whose largest call center is located in the Southeast. This area has been adversely affected by the loss of numerous textile mills but has been moderately revived by the influx of car manufacturing companies and their distributers. Industry is the primary employer in this area and this particular teleconferencing company is one of the area's largest employers, particularly

7

among those seeking employment at the hourly wage level. Assumptions and findings from this study are applicable to environments outside of the teleconferencing industry where there are a large number of hourly employees; however, assumptions and findings may not be applicable to other training departments within this company located in international business units due to cultural and geographical differences. Results from this investigation may not be representative to other call centers who also employ large numbers of hourly employees as their training program content may vastly differ from content delivered by this particular training program. Research was restricted to hourly employees as their retention rates are more volatile when compared to retention rates for salaried employees.

The participants in this study were informed that these surveys were part of a large research project and their identifying characteristics and results would be anonymous to the institution to which the project results were presented. They were also told that the surveys were administered in order to assist trainers for training development purposes as well as assist management with a strategic plan to increase employee engagement. Results may be shared with management for the employee's benefit. It was made clear to the employees that results from the ILS would be used as part of an employee assessment when job performance was evaluated but would not be a determinant in an employee's job security. Employees were also made aware that results from the OCQ were for data purposes only and would not be shared with management or HR.

An additional concern of the study was the high attrition rates within the newly hired employee population. It is not uncommon to lose employees during their first few days or weeks of employment due to various infractions or due to job abandonment. A final concern for the study was the projected hiring plan set forth by the company prior to this research. Hiring quotas

change due to changes in budgets, staffing, training agendas, and marketing strategies. These changes can have an adverse effect on hiring goals resulting in a smaller group of employees with which to conduct research.

Definitions of Terms

Employee Engagement – The degree to which employees within an organization (hourly or salaried) are emotionally connected to their workplace resulting in productivity.

Employee Retention – The ability of an industry, company, or organization to maintain a consistent roster of employees with minimal voluntary or involuntary turnover.

Employee Training – According to Moe (2010), training is defined as "a planned effort by a company to facilitate employees' learning of job-related competencies. These competencies include knowledge, skills, or behaviors that are critical for successful job performance" (p. 5).

Job Abandonment – Occurs when an employee leaves a job voluntarily and has no intention of returning to the job nor has he/she notified the employer of his/her intention to quit (Society for Human Resource Management, 2014).

Learning Styles Assessment/Instrument – A document consisting of questions or a survey which measures an individual's learning ability and behavior patterns.

New Hire – An employee who has been employed with this teleconferencing company for 120 days or less.

Teleconferencing Industry – The industry which provides the scheduling and execution of a web-based, audio, or video conference among customers who are remote from one another by means of telecommunication devices such as multi-line telephones or computer terminals.

Organization of the Study

This investigation seeks to add to the current literature regarding employee engagement and retention to determine if a learning styles assessment implemented during an initial training program can influence an employee's willingness to remain with a company. This investigation also seeks to discover if an employee's level of commitment to their organization is affected by the completion of a learning styles assessment. The reader will benefit from achieving a foundational understanding of the teleconferencing industry and its importance within the geographical area where the research takes place. The review of literature includes detailed descriptions of the terms employee engagement and employee retention as these matters are of critical importance to a company's revenue and growth. Learning style assessments and organizational commitment questionnaires and their relevance within a training program are also included in the review of literature. Information regarding the population of the study has been included as this particular population base includes hourly employees with minimal educational attainment beyond the secondary level. This population provides the most compelling data concerning employee retention within this industry.

The background and validity of the instrument used for the learning styles assessment, along with validity data regarding the organizational commitment questionnaire used in this study, is explained along with the methods used to determine their validity and why they are relevant instruments for this population. Subsequent statistical information regarding the learning styles assessment and organizational commitment questionnaire data is provided as well as an interpretation of these data and whether they support the research questions. Demographic information regarding the population that was researched is included due to the educational attainment differences of the population.

Summary

Due to detrimental economic changes beginning around 2008, the employment landscape changed and many workers with minimal educational attainment sought jobs such as those within the teleconferencing industry where the employment may be secure but the beginning pay scale is equivalent to or just above minimum wage. Within the teleconferencing industry, there is a need for data in order to explain why consistent low rates of employee retention are prevalent among hourly workers who have a year or less of employment. Changes to training methods used for new hire training programs during an employee's probationary period can possibly deter them from leaving the company (voluntarily or involuntarily) and prevent high rates of turnover.

A validated learning styles assessment instrument or organizational commitment survey has not been utilized within this particular teleconferencing company and the need for these types of assessments is now recognized. Much of the literature focusing on training programs, employee engagement, and employee retention speaks to the importance of a strong relationship between employees, their trainers, and their supervisors/managers. This relationship can begin with supervisors understanding the unique qualities their employees possess, such as differences in learning styles, information processing, loyalty, and the application of information to job duties. Chapter 2 will delve into content focusing on adult learning characteristics, workplace culture, employee engagement and retention in order to support the necessity of the research questions.

CHAPTER 2. REVIEW OF LITERATURE

This chapter examines research in the areas of employee retention within the teleconferencing industry, the corporate culture within a teleconferencing center, workplace education provided by on-site training departments, learning styles assessments, employee engagement, demographics and characteristics of hourly employees in this industry, and instruments used for various learning styles assessments and organizational commitment surveys. A theoretical framework is presented as the basis for the investigation of the existence of relationships between learning styles assessments and employee engagement and employee retention.

Purpose of the Study

The purpose of this study was to expand upon existing research that delves into learning styles assessments and organizational commitment (Dalton, 1999; Fleming, 1987; Knowles, 1972; Kolb & Kolb, 1984; Maslow, 1943; Wechsler, 2008) and explore whether a teleconferencing company's assessment procedures can create an environment that is conducive for high levels of employee engagement and retention. An investigation was also completed to discover any possible relationships between educational attainment and employee engagement and retention. Data collected from this research will assist HR departments, training departments, and management teams to create best practices and alter working environments that are supportive and productive for employees who are new to the workforce and new to the company.

Research Questions

The following research questions are examined as part of this study.

      1.   What is the relationship, if any, between the administration of learning styles assessments and employee engagement?

      2.   What is the relationship, if any, between the administration of learning styles assessments and employee retention?

      3.   What is the relationship, if any, between employee engagement and employee retention?

      4.   What is the relationship, if any, between educational attainment and employee engagement?

      5.   What is the relationship, if any, between educational attainment and employee retention?

Overview

Lack of employee retention and employee disengagement from the workplace have several underlying factors that create a disconnect between the employee and their employer (Wang & Hsieh, 2013). Employees who feel undervalued, underpaid, or unnoticed are less apt to become or remain productive and the breakdown of the relationship between an organization and its employees ultimately affects training outcomes and employee growth. Assessing how employees learn and react to their working environment is one step towards creating and fostering a relationship between an organization and those within. According to Hadfield (2006), it is important for classroom teachers (or for the purpose of this research, teleconferencing trainers), to identify how closely they should match training techniques to

employees' learning preferences and how much they must tailor these programs in order to reach a diverse group of adult learners. The intent of this research is to identify relationships between learning styles assessments, employee retention, and employee engagement.

Adult Learning Characteristics

This chapter provides an overview of adult learning characteristics as described by Knowles. Those who work with adults within the capacity of a training department must also recognize and appreciate these characteristics in order to gain insight and have guidance when working with adults who have varying life experiences and expectations.

According to Knowles (1970), the characteristics of adult learners are as follows:

- Autonomous and self-directed

- Accumulated foundation of experiences and knowledge

- Goal oriented

- Relevancy oriented

- Practical

- Needs to be shown respect

Lieb (1991) expands these characteristics and includes reasons why adults are motivated to learn. These reasons (listed below), along with the above list of adult learning characteristics, can support training developers with the creation and implementation of programs specifically designed for adult workers who will be involved in ongoing training within an industry.

Sources of Motivation for Adult Learning:

- Social relationships – To make new friends; to meet a need for associations and friendships.

- External relationships – To comply with instructions from someone else; to fulfill recommendations of someone with formal authority.

- Personal Advancement – To achieve higher status in a job; secure professional advancement.

- Escape/Stimulation – To relieve boredom, provide a break in the routine of home or work.

- Cognitive interest – To learn for the sake of learning; to satisfy an inquiring mind.

Table 1 provides a summary of assumptions trainers and instructors can make regarding adult learners. This table includes the aforementioned characteristics of adult learners and their sources of motivation and should be included in train-the-trainer manuals.

Table 1

Knowles' Five Assumptions of Adult Learners

Self-Concept	Adult Learner Experience	Readiness to Learn	Orientation to Learning	Motivation to Learn
As a person matures, his or her self-concept moves from one of being a dependent personality toward one of being self-directed.	As a person matures, he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning.	As a person matures, his/her readiness to learn becomes oriented increasingly to the developmental task of his/her social roles.	As a person matures, his/her time perspectives changes from one of postponed application of knowledge to immediacy of application and accordingly, his/her orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness.	As a person matures, the motivation to learn is internal.

Note. From *The adult learner: A neglected species,* by M. Knowles, 1973, Houston, TX: Gulf

Publishing Company

The differences between pedagogical and andragogical approaches should be considered and compared when teaching adults. Trainers may not realize that when they are actively

training employees, their approach may be pedagogical as they are making a sincere effort to
meet learning goals while adhering to training timelines. They may not be aware of the
differences between pedagogical and andragogical approaches and knowing when to use a
particular approach in order to enrich the learning experience for the employee. Trainers who
understand and appreciate the differences between these two approaches recognize the influence
of their role within an industry that values highly skilled workers. Table 2 provides a summary
of the differences between pedagogical and andragogical teaching principles.

Table 2

Pedagogy vs. Andragogy

	Pedagogical	Andragogical
The Learner	• The learner is dependent upon the instructor for all learning • The teacher/instructor assumes full responsibility for what it taught and how it is learned • The teacher/instructor evaluates learning	• The learner is self-directed • The learner is responsible for his/her own learning • Self-evaluation is characteristic of this approach
Role of the Learner's Experience	• The learner comes to the activity with little experience that could be tapped as a resource for learning • The experience of the instructor is most influential	• The learner brings a greater volume and quality of experience • Adults are a rich resource for one another • Different experiences assure diversity in groups of adults • Experience becomes the source of self-identity
Readiness to Learn	• Students are told what they have to learn in order to advance to the next level of mastery	• Any change is likely to trigger a readiness to learn • The need to know in order to perform more effectively in

	Pedagogical	Andragogical
		some aspect of one's life is important
		• Ability to assess gaps between where one is now and where one wants and needs to be
Orientation to Learning	• Learning is a process of acquiring prescribed subject matter	• Learners what to perform a task, solve a problem, live in a more satisfying way
	• Content units are sequenced according to the logic of the subject matter	• Learning must have relevance to real-life tasks
		• Learning is organized around life/work situations rather than subject matter units
Motivation for Learning	• Primarily motivated by external pressures, competition for grades, and the consequences of failure	• Internal motivators: self-esteem, recognition, better quality of life, self-confidence, self-actualization

Note. Adapted from http://www.educatorstechnology.com. Copyright 2010 – 2016 by

Educational Technology and Mobile Learning.

The information presented in the Tables 1 and 2 prepares trainers to work with adults and

avoid the exhaustive and fruitless approach of using a rigid training program that does not

consider variances in learning styles and training approaches. According to Lieb (1991),

instructors must learn why their students are enrolled and what motivates them and also discover

what prevents them from learning. This discovery allows for the removal of learning barriers

and prevents the possibility that adult learners will become discouraged and terminate their

employment or become disengaged from the learning process. Termination of employment and

disengagement from the learning process both negatively affect an organization's retention data

and depth of employee engagement and ultimately, its service levels. Lack of retention and

engagement results in the continuation of having to hire employees and as a result, expenses accrue and additional challenges develop for many organizations who seek to maintain a quota of hourly paid employees.

Characteristics of Hourly Employees

The inclusion of adult learning characteristics is vital when one is creating training programs for this population but many subgroups of adult learners populate training classrooms. The differences between an adult learner who seeks knowledge for personal growth and the adult learner who must learn knowledge for job security can indeed be two different populations as the former group may primarily learn for pleasure (at their leisure), while the latter group learns in order to maintain or improve their livelihood. For the purposes of this research, the adults who occupy training classes within this industry do so in order to fulfill training requirements set forth by the organization's leadership. While these adult learners may enjoy the training program, they are learning teleconferencing skills out of necessity and it's important for trainers to be familiar with the characteristics of this population. According to the Bureau of Labor Statistics (2013), the following characteristics are representative of hourly wage employees. These data align with the characteristics of hourly paid employees in the teleconferencing industry in the Southeast United States as beginning pay is only slightly higher than minimum wage.

- Workers under the age of 25 represent about one-fifth of the total of hourly paid workers.
- Of the total amount of hourly paid workers, roughly 11 percent are between the ages of 16 and 25.

- Of the total amount of hourly paid workers, men aged 16 and older comprise roughly 14 percent of this population.

- Of the total amount of hourly paid workers, women aged 16 and older comprise roughly 17 percent of this population.

- Of the total amount of hourly paid workers aged 16 and older, roughly 10 percent had less than a high school diploma.

- Of the total amount of hourly paid workers aged 16 and older, roughly 6 percent were Caucasian, 9 percent were African American, 6 percent were Asian, and 7 percent were Latino or Hispanic.

- Never-married workers were more likely than married workers to earn the federal minimum wage.

- About 11 percent of part-time workers were paid the federal minimum wage or less.

- By major occupational group, the highest proportion of hourly paid workers at or below the federal minimum wage was in the service occupations (about 12 percent).

These data provide organizations important information regarding the types of applicants they will have to screen and, eventually, train for their industry. If the majority of an applicant pool has the equivalent of a high school education in the form of a Graduate Equivalency Degree (GED) or has attempted to complete an Associate's degree without success, those who hire from this demographic can design training programs with this information in mind. Vocabulary used within training manuals and expectations regarding technical familiarity or expertise can be tailored to fit the educational level of newly hired employees yet provide enough of a challenge to motivate this pool of employees to expand their knowledge base. Organizations should also consider the ethnicity of their applicants as these potential employees may have limited English-

speaking skills yet provide valuable contributions to an organization who may conduct part of their business in a foreign language or have multiple business units around the globe.

While the above data are informative to an organization, specifically to an organization's training department, it would be limiting for those who design training programs to focus solely on these data regarding hourly worker characteristics. While these data do include important information about hourly wage earners, they alone should not define the methods used to design training curricula. Program planners and instructors must also consider adult learning characteristics in conjunction with hourly wage earner characteristics and appreciate the motivation many adult employees have regardless of education level, age, sex, marital status, and region/ethnicity. According to Curry (1983), it is considered a best practice to find a learning style that is common among a group of trainees yet trainers and instructors must also appreciate that learning styles are not static and will change as employees acquire skills and confidence. Changes in how employees learn can be monitored through ongoing assessment procedures and in order to build a foundation for which to scaffold training, it is advisable to begin with an understanding of an hourly wage earner's characteristics and the characteristics that define adult learners.

Factors Affecting Employee Retention

Employee attrition, or turnover, is costly and creates time-consuming circumstances in which human resources personnel must put forth the physical and fiscal effort to recruit and train new employees. More effort and research are needed in order to gain insight into the various reasons for why customer service organizations experience high rates of attrition among hourly employees. Determining at what point an employee begins to disconnect from their work environment can be valuable for organizations so personnel can pinpoint when this disconnect is

21

most likely to occur and recognize the signs exhibited by those who have become (or are becoming) disengaged.

Of the research on employee retention that is available, Chan (1996) reveals that employee turnover is less studied than other employee characteristics such as job performance. More recently, research conducted by Mattox and Jinkerson (2005) aligns with Chan's research and their findings delve deeper into the area of employee retention and suggest that "little research has examined the role that training plays in the retention of experienced hires" (p. 424). Furthermore, a case study conducted by Milman (2003), who focused on the hospitality industry, specifies that as of 2003 there was little research conducted on retention strategies directed towards hourly employees in many customer service industries. This research will hopefully add to the existing body of growing literature and provide valuable data regarding employee retention strategies operationalized through learning styles assessments and employee engagement questionnaires.

The aforementioned researchers are in agreement regarding the lack of information available to support a sold rationale for employee retention issues within the service industry yet fortunately, recent research has begun to shed light on employee turnover and the factors that contribute to high rates among hourly employees in the teleconferencing industry. For the purpose of this research, the factors mentioned throughout this section have all played a crucial part in positively or negatively affecting employee turnover. These factors include:

- Employee self-efficacy
- Organizational socialization
- Employee motivation
- Andragogical training methods

One such factor that influences job retention is self-efficacy (Panatik, O'Driscoll, & Anderson, 2011). A well-developed training program that uses learning styles assessments can encourage employees to cope with the demands of the workplace using a problem-focused strategy rather than an emotion-focused strategy (Panatik et al., 2011).

Self-efficacy may be more evident in some employees when compared to others and well-developed training programs that are supported by dedicated trainers can positively influence those employees who are not as self-efficacious. The organizational socialization of the workplace also creates a supportive environment for a newly hired employee. According to Saeed, Abu Mansor, Siddique, Anis-ul-Haq, and Ishaq (2012), organizational socialization contributes to the "recruitment/selection of employees, relevant training exposure, and instilling the attitudes appropriate for the job or task" (p. 96). A more thorough definition of organizational socialization is provided by Taormina (1997) who defines it as "the process by which a person secures relevant job skills, acquires a functional level of organizational understanding, attains supportive social interactions with co-workers, and generally accepts the established ways of a particular organization" (p. 29).

The pathway towards successful organizational socialization is supported by adequately training a newly hired employee so they may acquire a clear understanding and appreciation of the organization's structure and culture. Through a learning styles assessment, trainers and those involved with the development of the employee can nurture the socialization process by understanding an employee's approach to new material and new environments. The ideal outcome is an employee who is engaged in the culture of their workplace and commits to employment for a significant amount of time. What constitutes a significant amount of employment is rather subjective; however, employees in the teleconferencing company where

this research takes place are considered tenured employees once they have been employed for a year. Typically, within this particular organization, employee attrition is highest between the first and fourth month of employment (see Appendix A).

Experienced employees who are equipped to perform their job duties autonomously are motivated to maintain their momentum through the socialization process resulting in employee retention. According to Cooper-Thomas and Anderson (2006), organizational socialization is an important factor in determining whether an employee chooses to remain part of an organization. Disassociation from the work place and from colleagues within the organization creates an environment of isolation for the employee causing them to consider employment elsewhere should other opportunities become available. Training methods that do not meet the needs of the employee can cause the disconnection between an employee and the organization to grow. Training programs that have adapted their methods to an andragogical approach towards employee development foster the organizational socialization process by knowing when to move away from a pedagogical teaching style. Research conducted by Knowles, Holton, and Swanson (2012) supports the blending of pedagogical and andragogical approaches when working with novice adult learners as "pedagogical strategies are often necessary until they have mastered the basics. Or, when leading learners with low levels of confidence, then strategies more appropriate for dependent learners would be recommended" (p. 241).

The use of learning styles assessments can reveal an employee's confidence level and readiness to learn so instructors may know when to use a more andragogical approach in order for instruction to become learner-centered rather than instructor-centered. Trainers and instructors should appreciate this important piece of information and realize this as employees become more experienced within the parameters of their job role. Indeed, recognition and

24

appreciation of the differences within a group of newly hired employees will discourage less confident learners from withdrawing and possibly leaving the company or remaining employed yet unproductive. According to Russell (2006), assessing an employee's learning style "is a fundamental step prior to beginning any educational activity" (p. 352). The individual (or trainer) who conducts the assessment is in a position to consider adult learning characteristics while creating a suitable training program for adult learners who will inevitably display a variety of these characteristics. Information of this nature can prevent training program developers from assuming that newly hired adults will all benefit from the same type of instruction and learn new material at similar rates. This information will also allow for a deeper understanding of learning outcomes. Should a newly hired employee lack the basic skills necessary to perform their job, then perhaps too wide a gap exists between the delivery and understanding of new information.

The benefits of using a learning styles assessment to determine ideal training approaches and garner learning outcomes extends beyond a training department and is a key factor for creating relationships between leadership and employees. Those at the supervisor and management level can develop a keen awareness of how their employees approach and process new information as they have more exposure to them once an employee has completed a new hire training program. Should an employee appear to lag behind their peers, management can review their past assessments and determine if this individual needs more attention. These observations can then be shared with a training team and together, management and training departments can create summative assessments in order to alter training programs as needed. In order for this ongoing consideration of employee learning styles to develop and sustain, it is necessary to provide insight into the corporate culture of the teleconferencing industry and

determine if the culture is conducive to ongoing learning, employee growth, and in-depth training.

Workplace Culture in the Teleconferencing Industry

Workplace culture plays a large role in whether an employee feels supported by co-workers and management or whether an employee feels as though their job role is dispensable and their presence is less visible when compared to those in a leadership position. According to Alvesson (2013), "even in those organizations where cultural issues receive little explicit attention, how people in a company think, feel, value and act is guided by ideas, meaning, and beliefs of a cultural (socially shared) nature" (p. 1). Alvesson further explains corporate culture as a significant force outside of management's realization or appreciation of its existence. He further posits that "senior organizational members are always, in one way or another, 'managing culture' – underscoring what is important and what is less so and framing how the corporate world should be understood" (Alvesson, 2013, p. 1). Similar research conducted by Huselid, Becker, and Beatty (2005) define workplace culture as "reflecting a firm's fundamental assumptions and values about what behaviors are appropriate throughout the organization" (p. 9). Based on the definitions of workplace culture, it is necessary to establish a culture of high performance and effective management within organizations in order for employee job satisfaction, productivity, and growth to achieve consistent levels of success (Alvesson, 2013; Huselid et al., 2005).

Organizations that are committed to developing employees in order for them to become consistently productive are aware of the relationship between workplace culture and the aforementioned organizational socialization. According to Alvesson (2013), "rather than saying that work group culture facilitates socialization, it makes more sense to say that work group

culture is the prerequisite for socialization. Without a distinct culture, no distinct socialization is needed or possible" (p. 64). While the influence of workplace culture on an employee's identification and commitment to their workplace is an important relationship of which to be aware, it is also necessary to explore the relationship between workplace culture and the use of learning styles assessments and their effect on employee engagement.

Within most new hire training programs, learning takes place in a group and instruction is delivered in a homogenous format. Assuming individual learning characteristics are taken into consideration via a learning styles assessment, cohesion begins to develop between individuals in a training group and cohorts form. This cohort is the new employee's initial attachment to the organization. According to Aksoy, Apak, Eren, and Korkmaz (2014), "when individuals who obtained information via learning interpret the learnt information together and head for a common purpose, team based learning develops" (p. 303). The recognition and support of this cohort creates an atmosphere of inclusion and belonging. It is at this point in a training program when new employees become aware of the culture of the organization and begin to feel as though they are an integral member of a larger entity. Organizations who successfully manage how new employees are acclimated to the workplace culture use learning assessments and training methods as tools to create an environment of continued growth and inclusion, especially when an organization undergoes a technological or managerial change. According to Egan, Yang, and Bartlett (2004), a strong relationship exists between an organization's learning culture and employee job satisfaction and one's motivation to either remain with or advance within the organization.

Learning styles assessments can be the foundation for linking the expectations the organization has for the employee and their perception of the workplace culture. When

employees have had an opportunity to thoroughly review their learning styles assessment with their training instructor, he/she will realize and understand that the organization they are now a part of appreciates and encourages each employee's motivational tendencies and professional growth. This review must focus on the strengths of the employee as well as their challenge areas. Identifying workplace competencies within each employee outlines where learning has been successful and where more training may be necessary. Indeed, Huselid et al. (2005) propose that "different parts of the business will require different competency profiles, and the entire workforce measurement and management systems need to be sensitive to these distinctions" (p. 9). An organization's sensitivity to and awareness of an employee's learning styles and competencies will result in an employee feeling connected to and supported within the workplace and will reduce the turnover mindset.

Factors that contribute to turnover must be documented should an organization fail to capitalize on employee competencies. As groups of new hires typically share similar educational characteristics (Bureau of Labor Statistics, 2013), they are also likely to share similar opinions and beliefs about the organization. According to Moore and Burke (2002), turnover culture develops in a similar fashion to organizational culture:

> Artifacts (such as stories, customs, information flaws, and structures) are interpreted by and influence organizational members. When shared by an organization's members, those artifacts ultimately transform into basic assumptions and mutual cognitive schema regarding turnover perceptions, intentions, and behaviors. These shared perceptions can intensify, as interaction breeds similarity; that is, as individuals become more emotionally attached to groups, units, or cohorts, they become increasingly compliant with established norms, whether high or low. (p. 74)

Indeed, while positive reactions to workplace culture are shared between employees, negative reactions and opinions towards workplace culture are also shared and can result in employees becoming tempted to seek employment elsewhere or abandon their job with little to no notice. How management supports workplace culture and responds to turnover culture factors heavily into an employee's decision to remain part of an organization. According to Moore and Burke (2002), "managers are likely to possess the greatest potential for influencing turnover culture at the workgroup and organizational levels" (p. 77).

To connect learning styles assessments to a reduction in turnover, it would be prudent for those in management to realize differences in trainability amongst their employees so they may recognize when employees need additional training for particular industry-specific processes and needs. A learning styles assessment can act as a set of guidelines so managers and supervisors can relay information to their employees in the best way possible. This approach prevents employees from feeling lost and inadequate in an industry with a large population of hourly paid personnel.

The workplace culture is largely influenced by those who make company-affecting decisions and the reactions of those who are influenced by such decisions (Alvesson, 2013). Access to training, classes, or workshops also promotes an environment of support, learning, and growth. Workforce education is an area that deserves attention in this research as the use of learning styles assessments can become a factor in determining how training material is to be delivered to groups of employees with diverse learning styles. Recognizing differences or similarities among employees enables the employee to participate in an andragogous learning environment where information is shared between the instructor and the employee rather than learning being instructor-centered.

Workplace Education within Training Programs

Industries such as the teleconferencing industry structure their training in a hierarchical manner in order to establish specific training goals depending upon an employee's current job status, length of time with the company, and readiness to be promoted to a job status where advanced technical skills are necessary. Employees who are willing to increase their job performance are encouraged to pursue additional training and education opportunities for professional growth. Examples of these opportunities may include a resume writing class or a presentation skills class. While this training is elective and takes place within the organization, the pursuit of knowledge reflects the perception employees develop regarding workplace education. What is learned from these opportunities can result in a well-rounded employee who applies his/her newly learned presentation skills within the workplace. Indeed, research shows that adults will pursue "vocational or practical education that leads to knowledge about how to do something" (Cross, 1981, p. 207). When an environment strongly encourages continued learning, employees will willingly take part in training opportunities for personal and professional growth leading to workplace engagement.

When adults are hired to work in an organization, they bring with them past experiences, learning traits, and expectations regarding what they want to learn and how they will be taught or trained within an organization's training program. As instructors become more familiar with the employees who are part of an ongoing training program, they begin to recognize learning styles that may be unfamiliar to the learner themselves. According to Wojecki (2007), "adult learners' perspectives and dispositions to formal learning may shape the contours of one's relationships to formal learning" (p. 170). Instructors can then place themselves in a position to guide employees

to consider training that may be unrelated to the actual job yet benefit them on a deeper level, such as learning how to enhance presentation skills.

Instructors who are trained to recognize differences in an adult learners' perspective of themselves when compared to the instructor's perspectives can coach and guide adult learners in order to help them develop a more holistic view of themselves as a learner. Adult learners can determine when they employ passive learning techniques and when they assume a more active learning role as it is expected that adults will alternate between being an active learner and a passive learner depending on the content being delivered to them. According to Petress (2008), "passive learning requires little student personal involvement or overt work and it is not self-reinforcing" (p. 566). Despite the negative connotations this explanation conjures, a passive approach to learning may at first be the only approach taken by a novice adult learner due to the exposure to new materials. It is then the instructor's obligation to guide the adult learner to assume a more active role in their learning. According to Petress (2008), "the active learner is not overly dependent on the teacher; active learning makes the student a partner in the learning process" (p. 566).

At this point, it is important to briefly discuss learning theories with which a successful training program can align themselves or use as a model. When training personnel apply learning theories to actual instruction, training programs have more impact on the employee and training is adapted as needed. Table 3 provides an example of how learning theory constructs can be applied to actual training.

Table 3

Translating Theory into Practice

Theory	Into	Practice
Adults remember 10% of what they hear, 65% of what they hear and see and 80% of what they hear, see and do.	→	To increase retention, provide both auditory and visual stimulation and allow for practice.
The greater the degree of job relevance to the individual, the greater is the degree of learning.	→	Provide examples that are directly job related; allow practice in job like conditions.
Adults need to be able to integrate new ideas into what they already know if they are going to be able to retain the information.	→	Capitalize on the experiences of the audience to build new concepts; structure lessons to move from the known to the unknown.
Adults prefer self-directed and self-paced instruction to group learning led by an instructor.	→	If the training is done in a group led by the instructor, build in independent activities; consider trainee focused approaches to training.
Adults bring a great deal of experience to training.	→	Capitalize on the experiences by facilitating discussions.
Integration of new knowledge and skills on the job requires application on the job.	→	Build in follow-up activities or action plans to be used on the job.

Note. From *Train the trainer: Coursebook,* by P.L. Ittney and A.F. Douds, 2004, Amherst, MA:

Human Resource Development.

Training departments who use teaching methods that place the learner at the center of instruction facilitate an environment that aligns with the foundation of adult education methods. This method of instructor – learner interaction is in line with the humanist learning theory which proposes that adult learners should be studied holistically and their goals and motivations taken seriously (Knowles, 1972). In agreement with Knowles, Cross (1981) posits that the humanist theory "assumes that there is a natural tendency for people to learn and that learning will flourish if nourishing, encouraging environments are provided" (p. 228).

When this application is utilized in a training environment, instructors should consider an employee's short-term and long-term goals and should track their development towards autonomy. The humanist theory differs from the behaviorist theory which does not consider the role of an adult learners' motivation or internal state when they approach a learning goal (Skinner, 1976). It is pertinent for training personnel to understand that adult learners are not empty slates; when they enter into a training environment where learning goals are presented to them for job preparation purposes, a trainer or instructor cannot invalidate their past life experiences, prior work experiences, or their motivations. The humanist theory is more similar to the cognitivist theory in that adults process information after they have learned a task and learning outcomes can be observed and assessed. Active participation is deemed as important and necessary in order for learning outcomes to be possible (Driscoll, 2005). Figure 1 (Gagne, 1985), when used in conjunction with humanist theories of learning, can serve as an excellent framework for those who create training programs or assess learning outcomes.

It should not be assumed that trainers and instructors within an organization are cognizant of adult education learning theories yet knowledge of such theories is beneficial to their own professional growth as providers of training. The information in Appendices J–N (see Appendices J–N) can lay the foundation for exploring learning theories and understanding why one or two theories align with a training program's goals when compared to others (Durr, 2011). The matrices address the following questions that training departments should consider and support with learning outcome data when creating or altering training programs:
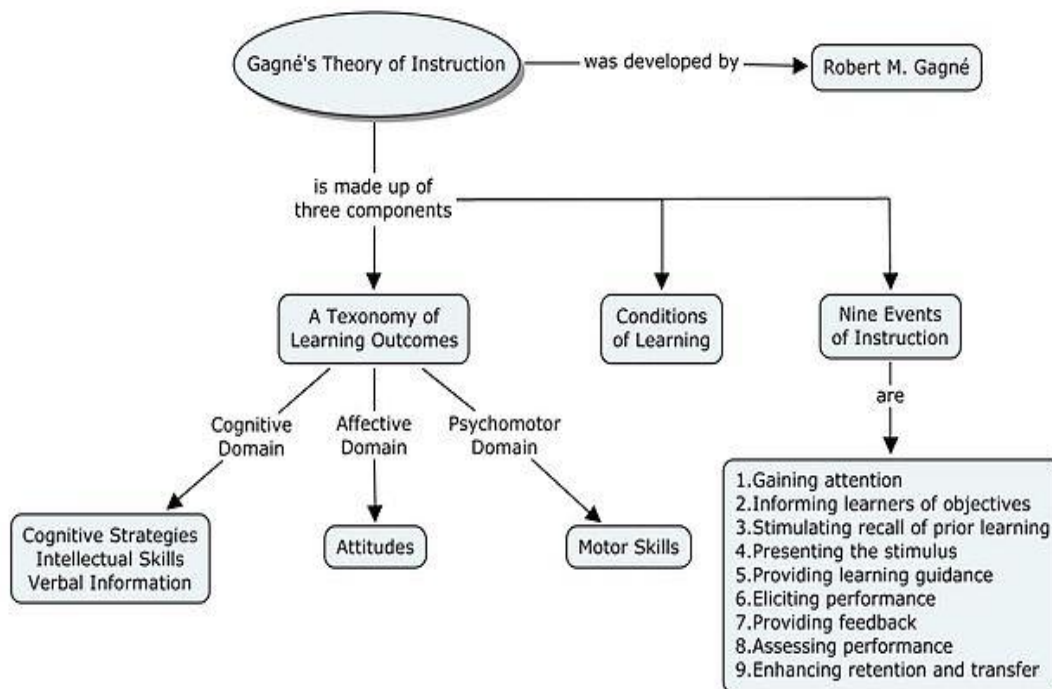
Figure 1. Gagne's Theory of Instruction

1. How does learning occur?

2. What is the role of memory?

3. How does transfer occur?

4. What types of learning are best explained by this theory?

5. How is technology used for learning in your industry?

Indeed, appreciating the foundations of how instruction can be successfully implemented when working with adult learners can enhance their learning experience and prepare for them the job for which they were hired. Theoretical constructs and visual guides, such as the Learning Theories Matrix and Gagne's Theory of Instruction should be thoroughly researched and understood so they can contribute to the preparation a trainer or instructor must complete before they begin to train. Once an instructor understands how to apply this information to their training, they can then begin to work with adult learners and adapt their training as needed based on an adult's learning styles assessment. Learning styles assessments and their importance to an organization's training program are discussed in the next section.

Learning Styles Assessments

Training departments can factor in the learning styles of their employees when planning and executing training programs, particularly for newly hired employees while remaining aware of the fact that over time, one's learning style will change based on acquired knowledge, an increase in confidence, and comfort within the organization. According to Knowles et al. (2012), "When individuals become conscience of their learning style and facilitators become aware of the styles of their learners, learning motivation and effectiveness increases" (p. 288). Various assessments are available for the trainer to disperse among their trainees and assessments can be completed in a relatively short amount of time in a variety of formats. Assessments should be

researched in order to find the best-fit for an organization. Examples of assessments and their value to a training program are explained below.

Personal Adult Learning Style Inventory

The Personal Adult Learning Style Inventory was developed by Malcolm S. Knowles and is a self-assessment that is given to those who design or facilitate training programs for adult learners so they may rate their knowledge and awareness of adult learning characteristics. Adult learners benefit from an instructor's enriched knowledge about adult education teaching or training methods as the learning process can become self-directed when appropriate or the instructor can remain more involved depending on the adult's learning style and level of experience and expertise. The assessment consists of thirty pairs of items where the instructor is asked to consider the degree to which they agree with the statements provided. The following key is used for each statement in the inventory (Knowles et al., 2012).

A	=	I agree fully with statement A
A>B	=	I agree more with statement A than B
NANB	=	I do not agree with either statement A or B
B>A	=	I agree more with statement B than A
B	=	I agree fully with statement B

Some example questions are provided below (Knowles et al., 2012):

1. A number of important differences exist between youths and adults as learners that can affect the learning process.

2. Effective learning/training design puts equal weight on content and process plans.

3. Effective facilitators/trainers model self-directed learning in their own behavior, both within and outside the learning session.

4. Effective learning/training is based on sound methods for involving learners in assessing their own learning needs.

5. Client system representatives must be involved in the planning of learning/training programs.

Upon completion of the Personal Adult Learning Styles Inventory, trainers or instructors can better understand their pedagogical or andragogical orientations to training, can develop a training program outline that may be more andragogical in nature should they discover a trend that favors a more pedagogical approach to training, and can create self-directed assignments or tasks in order to balance both orientations to training. It should be noted that self-assessments may not be as accurate as intended as "how we would like to be seen by others comes into conflict with how we really behave" (Knowles et al., 2012, p. 288). The trainer is encouraged to be as honest as possible so they may become more aware of their own teaching characteristics.

Visual, Aural, Read/Write, Kinesthetic (VARK) Learning Style Inventory

The VARK Learning Style Inventory is a questionnaire developed by Dr. Neil D. Fleming in 1987 and assesses a learner's sensory approaches to learning. It was designed with the intention to assist students who may encounter difficulty with their studies or training (Marcy, 2001). Employees who are regularly trained for more complex job duties often encounter difficulty or reach a point of stagnation where they feel as though the content has become too difficult for them to absorb. This learning style inventory can help trainers better assess how to train employees and how to adapt training methods to fit the needs of employees. For example, if an employee learns best through aural stimulation, then training material may be better understood when it's presented via a lecture or by listening to a training tutorial (Marcy, 2001).

Based on the foundations of this learning style inventory, it may not be necessary to initially administer this to each employee in a training program. It is helpful for trainers to recognize and appreciate that their training programs consist of learners who are multimodal; that is, they learn using more than one sensory preference. Because of the prevalence of multimodal learners in any given group of trainees, the developers strongly suggest that trainers complete this questionnaire in order to expose teaching preferences that may not align with an adult's learning preference, especially if a large amount of training material must be covered in a short amount of time (Marcy, 2001). Examples of VARK questions are below.

How Do I Learn Best?

Choose the answer which best explains your preference and circle the letter(s) next to it. Please circle more than one if a single answer does not match your perception. Leave blank any question that does not apply.

38

1. You are helping someone who wants to go to your airport, the center of town or railway station. You would:

    a. go with her.

    b. tell her the directions.

    c. write down the directions.

    d. draw, or show her a map, or give her a map.

2. A website has a video showing how to make a special graph. A person speaking, some lists and words describing what to do and some diagrams. You would learn most from:

    a. seeing the diagrams.

    b. listening.

    c. reading the words.

    d. watching the actions.

3. You are planning a vacation for a group. You want some feedback from them about the plan. You would:

    a. describe some of the highlights they will experience.

    b. use a map to show them the places.

    c. give them a copy of the printed itinerary.

    d. phone, text or email them.

4. You are going to cook something as a special treat. You would:

    a. cook something you know without the need for instructions.

    b. ask friends for suggestions.

    c. look on the Internet or in some cookbooks for ideas from the pictures.

    d. use a good recipe.

5. A group of tourists want to learn about the parks or wildlife reserves in your area. You would:

> a. talk about, or arrange a talk for them about parks or wildlife reserves.
>
> b. show them maps and internet pictures.
>
> c. take them to a park or wildlife reserve and walk with them.
>
> d. give them a book or pamphlets about the parks or wildlife reserves.

Learning Tactics Inventory (LTI)

Designed by Maxine Dalton in 1999, the LTI is a self-scored tool that summarizes the learner's ability and their learning behavior (Center for Creative Leadership, 2010) and specifically addresses the following questions:

1. Why do some people learn from the opportunities of the workplace, while others fail?

2. Can individuals improve their ability to learn from experience?

A critical component of the LTI is its emphasis on learning behaviors and establishing learning goals. The assessment contains thirty-two questions and participants provide responses using a scale that ranges from "I have almost never used this approach" to "I almost always use this approach." Upon completion of the LTI, an employee will be able to understand or identify the following (Dalton, 1999, p. 2):

- Identify their preferred learning patterns

- Identify tactics they avoid using

- Recognize how their patterns may cause them to misuse or avoid particular work-based challenges

- Adopt new learning behaviors

- Begin to set learning goals rather than performance goals

Based on the information this inventory assesses, it may be a better fit for employees who are in the process of becoming established within in an organization or have been employed for a significant period of time as they may be better able to answer the questions within the inventory.

Learning Styles Inventory

Developed by Kolb and Kolb in 1984, the Learning Styles Inventory helps an individual identify four basic learning styles that are present in their approach to learning based on their past experience. According to Kolb and Kolb (2005), "learning is best conceived as a process, not in terms of outcomes" (p. 2). Organizations that rely on training departments to provide continuous learning opportunities do so with the expectation that current training is based upon past learning. Upon completion of this assessment, individuals will be able to identify which mode of learning they utilize when presented with new concepts and opportunities. The four modes are as follows:

- Concrete-Experience

- Abstract-Conceptualization

- Reflective Observation

- Active-Experimentation

These modes are influenced by one's behavior regarding their personality, their educational level, their professional career, their current job role, and their adaptive competencies. The application of these results to the workplace is important for instructors to determine what mode an employee will have a tendency to use as they progress within an organization or, on the contrary, if they do not progress or exhibit professional growth.

The previous examples of learning styles assessments provide an overview of how an organization can effectively train employees at the beginning of and during their employment. Learning styles assessments are not limited to those who are to be trained; facilitators and trainers also benefit from completing various assessments in order to gauge their approach to their trainees and to keep abreast of any shifts or changes that may have occurred regarding how they design or implement training programs. Trainers can also become more aware of teachable moments and capitalize on when to encourage deeper research or implement a more hands-on training approach (Cross, 1981). Participants in a training program, whether they are newly hired or tenured employees, learn to recognize when their learning needs have been met or when the trainer's attempt to teach them is genuine resulting in a positive response from the trainee. Positive responses from the vantage point of the employee results in a deeper level of employee engagement and this topic is explored in the next section.

Employee Engagement

On a global level, integrity and authenticity are considered to be two of the most important workplace values (George, Sims, McLean, & Mayer, 2007) and these values have a tremendous effect on a company's return on investments (ROI) when the resources necessary for building a successful training program are considered. Successful training programs result in employees who feel that they are supported by an organization and are treated sincerely by those to whom they report (Wang & Hsieh, 2013). Employee engagement is succinctly defined as an individual's involvement in, satisfaction with, and enthusiasm for work (Harter, Schmidt, & Hayes, 2002). Several factors result in employee engagement and the common denominator unifying these factors is the trust an employee places in those who occupy a managerial role. According to Cardus (2013), other factors include but are not limited to:

- Competent managers

- Contextual goals

- Objective Metrics

- Resources

- Autonomy

These factors are woven into the organizational framework of most companies yet one should

not assume that those in a managerial role are aware of their importance or their influence on the

level of employee engagement measured by employee surveys and questionnaires. The presence

of each of these factors is required in order for a company to measure engagement outcomes

(Cardus, 2013). Employee engagement is also enhanced by a strong relationship between

employees and the organization as whole. Organizations cannot retain employees when

employees feel detached, unappreciated, or invisible.

McCulloch and Turban (2007) explored the relationship between an organization,

specifically a call center, and employees and sought to discover a person-organization (P-O) fit.

P-O fit is simply defined as the compatibility between individuals and the organizations for

whom they work (Kristof, 1996). Research done within a call center is crucial for discovering

the strength of a relationship between an employee and an organization as employee turnover is

typically high in these environments (McCulloch & Turban, 2007). According to McCulloch

and Turban (2007), evidence supports that perceived P-O fit is related to employee success

within an organization. Success can be defined as the organization's fiscal success and

consistency with maintaining a solid, loyal employee base. P-O fit can be broken down into

more detailed components but for the sake of this research, actual (or objective) P-O fit will be

mentioned as it is defined as "the actual similarity of an employee and an organization on a

fundamental characteristic such as value" (McCulloch & Turban, 2007, p. 63) suggesting that P-O fit does indeed predict the likelihood of employee retention.

Based on this information, it would be prudent for organizations to use learning styles assessments as those results can encourage a potentially strong P-O fit. Following the administration of a learning styles assessment, organizations can then measure employee engagement through a survey such as the OCQ in order to find a possible relationship between learning styles assessments and employee commitment or loyalty. These results will help an organization determine each employee's P-O fit. A favorable P-O fit is a realistic goal for the teleconferencing industry as their success relies heavily on their employees' customer service skills. This finding aligns with research conducted by Jackson, Schuler, and Rivero (1989) who studied organizational characteristics as predictors of personnel practices and successes. According to Jackson et al. (1989), "the intangible nature of services means that performance is difficult for supervisors to monitor directly, so employees must be trusted to monitor their own performance" (p. 730). Before an employee is able to monitor their own performance, those within the organization who play an integral role in the employees' training and acclimation into a company must first understand how the employee approaches the information they must absorb in order to gain the insight necessary to monitor their performance. As the organization and the employee both learn more about each other, the employee grows to become autonomous (or requires minimal supervision), is able to monitor their performance, and seeks assistance as needed. A partnership forms between the organization and the employee based on the organization's investment in learning about their employees' learning styles.

Theoretical Framework for the Investigation

The purpose of this study was to investigate the relationship, if any, between employee retention, engagement, and whether the use of a learning styles assessment and organizational commitment questionnaire can increase the possibility that employees will choose to remain with a teleconferencing organization and if the use of learning styles assessments results in stronger employee engagement. This effort does not attempt to explain the superiority of one learning styles assessment over another; it simply proposes that the mere use of a learning styles assessment is sufficient enough to create a foundation with which to develop a positive relationship, or P-O fit, between an employee and an organization therefore increasing the likelihood of employee retention and employee engagement.

Recent research on employee retention and engagement has focused on how these two ideologies are connected. According to Wang and Hsieh (2013), when managers and supervisors demonstrate behaviors that are authentic and trustworthy, employees are more likely to not only reciprocate those actions but become and remain engaged with their work environment. Similarly, Mattox and Jinkerson (2005) suggest that employees leave when they feel inadequately prepared to assume new job duties or when they feel lost or ignored by those to whom they report. To avoid the slippery slope of waning employee engagement (affecting employee retention), organizations must base their training programs on theoretical models that consider adult learning characteristics, the importance of learning styles assessments, and the humanist approach to training adults who represent a variety of life experiences and educational attainment levels. Adaptation-Innovation theory and the humanist theory will be discussed as supporting the use of learning styles assessments and organizational commitment surveys for training programs housed within the teleconferencing industry.

45

Adaptation-Innovation Theory

Adaptation-Innovation theory is related to the previously mentioned P-O fit as it focuses on the degree to which an employee's problem solving skills fit the demands of the workplace (Chan, 1996). This fit is also referred to as cognitive misfit (Chan, 1996) and "provided significant and substantial incremental validity in predicting actual turnover over and the predictability provided by performance" (Chan, 1996, p. 194). As job retention is a valid concern for many corporations who employ large numbers of hourly employees, adaptation-innovation theory can be a valuable determinant when screening potential employees. While it is expected that there will be some employee attrition, more stringent methods of assessing newly hired employees can prevent the ongoing issues of employee retention and lack of engagement.

To further explain adaptation-innovation theory, it is necessary to include the continuum on which it falls. According to Chan (1996), adaptation-innovation theory explains the approach employees use when problem solving. Adaptors "prefer to operate within consensually agreed paradigms and are skilled in initiating changes that improve (or adapt) current ways of doing things" (Chan, 1996, p. 195). Conversely, innovators "are more likely to reconstruct the problem and tend to perceive the existing paradigm as a part of the problem" (Chan, 1996, p. 195). This detailed, individualized information may not be revealed from a learning styles assessment administered during the first few weeks of new hire training; however, a learning styles assessment completed during the early stage of employment can lay the foundation for future assessments (such those used to determine P-O fit) as employees progress and develop more fine-tuned skills and as they become better connected to their role within the organization. Training programs can use data derived from learning styles assessments and P-O fit assessments

to determine the most ideal method to use when training employees with varying learning styles and cognitive approaches towards problem solving.

Humanist Theory

The humanist theory of training supports the goal that most training programs base their instruction on: learning is a personal act to fulfill one's potential. In industry, one's potential may only be appreciated with regards to the organization's needs and could exclude growth in areas of personal development. The humanist approach builds a foundation for training programs to become aware of employees' overall learning potential and as a result, individuals may discover a particular learning style and successfully use it for personal and professional development resulting in a well-rounded employee. According to Gawel (1997), people's actions are motivated as their personal and professional needs are fulfilled. Figure 2 explains how Maslow's Hierarchy of Needs can be tied into a humanist theory approach to training and can operate as a guide for the organization to determine if and how learning needs are met. In an ideal workplace environment, in order to progress towards learning more intricate job skills, adult learners must first learn basic job skills and the acquisition of basic job skills fulfills the safety and security level of Maslow's Hierarchy of Needs. Once this need is satisfied, adult learners may feel more connected, or engaged, to their workplace which provides a sense of connection to an organization. This connection, or engagement, increases self-esteem and employees gain the respect of others as a result of their involvement with the organization. Once an employee reaches the self-actualization level, they feel as though their role within an organization serves a purpose and their potential for continued growth serves a purpose for the organization and for themselves.
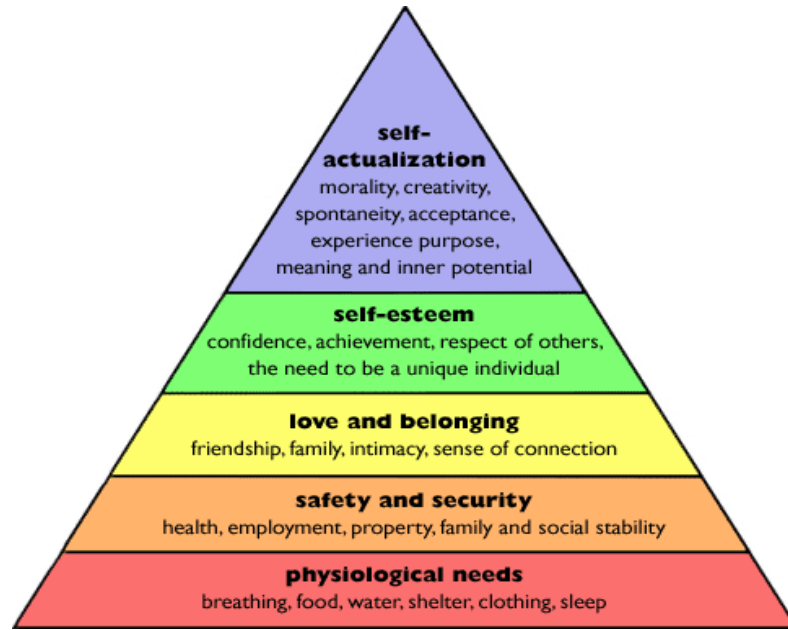
From Maslow, 1943

Figure 2. Maslow's Hierarchy of Needs

Within the context of the workplace, employers often have a structured design for the progression of hourly employees with promotions taking place at predetermined time intervals. This design often does not take into consideration the difference in learning styles each employee has; while some employees may learn technological-based job skills easily and progress quickly, others may lag and require more training time in order to fully understand each skill level. According to Gawel (1997), employers "have ignored what individuals say they want, instead telling employees what they want, based on what managers believe most people want under the circumstances" (p. 3). Should a training program take into consideration the adaptation-innovation theory, and the Humanist theory along with Maslow's Hierarchy of Needs and apply these to an employee development curriculum, then organizations would most likely experience success with employee engagement and retention but this hierarchy must be fulfilled according to an employee's learning style. Not all employees will progress along this hierarchy in a

parallel fashion; however, this hierarchy, along with Gagne's Theory of Instruction can work well with the learning styles assessment in order to create a training program that truly fits the needs of hourly employees. As a result, P-O fit is determined and employee engagement and retention reach pre-determined levels that are considered successful.

Summary

Learning styles assessments have numerous applications and are valuable for industries and organizations who have training programs for employees of all skill levels. Within the customer service industry, a multitude of personality characteristics abound that determine one's trainability and success (Motowildo, Brownlee, & Schmit, 2008). When organizations, specifically training departments within organizations, take an active role in determining how their employees learn and how best to deliver training material, employees recognize the investment and deem this as a positive step towards forming a professional relationship with their employer.

Research regarding employee retention and engagement is increasing as organizations recognize the benefit of not only reducing attrition but creating an atmosphere of continuous productivity and motivation. An emerging trend towards creating an environment of engagement is to use learning styles assessments during an employee's career as one's learning styles will adapt as he/she develops more complex job skills and determines their professional goals. The focus of this research is to determine if a relationship exists between the use of learning styles assessments, employee retention, and employee engagement in a teleconferencing company as this service sector experiences high employee turnover among hourly employees.

CHAPTER 3. METHODS

This chapter explains the methods used to support the hypotheses set forth based on the research questions. A thorough explanation of the instruments will be provided along with validity and reliability data for them. A description of the sample population that took part in this study will also be provided along with information explaining the reasons for discontinuing the intermittent use of alternative learning styles assessments.

Purpose of the Study

The purpose of this study was to expand upon existing research that delves into learning styles assessments and organizational commitment (Dalton, 1999; Fleming, 1987; Knowles, 1972; Kolb & Kolb, 1984; Maslow, 1943; Wechsler, 2008) and explore whether a teleconferencing company's assessment procedures can create an environment that is conducive for high levels of employee engagement and retention. An investigation was also completed to discover any possible relationships between educational attainment and employee engagement and employee retention. Data collected from this research will assist HR departments, training departments, and management teams to create best practices and alter working environments that are supportive and productive for employees who are new to the workforce and new to the company.

Research Questions

The instruments used in this study were designed to assess an employee's learning style and the results are then compared to an employee's feedback regarding their level of engagement (their commitment to the organization). Demographic data focusing on the highest level of

education attained will also be taken into consideration when assessing employee engagement and retention. In addition, the following research questions were developed for the purpose of this study:

1.   What is the relationship, if any, between the administration of learning styles assessments and employee engagement?

2.   What is the relationship, if any, between the administration of learning styles assessments and employee retention?

3.   What is the relationship, if any, between employee engagement and employee retention?

4.   What is the relationship, if any, between educational attainment and employee engagement?

5.   What is the relationship, if any, between educational attainment and employee retention?

The research is structured to develop in the following stages:

1. Use a validated learning styles assessment instrument and distribute to a training department located in a call center in the Southeastern U.S. so they may distribute to newly-hired hourly employees who have been with the company for less than a month.

2. Collect demographic data regarding employees' educational attainment. These data will be gathered from employees who have been with the company for no more than one year.

3. Distribute an employee engagement survey to the same group of employees who completed the learning styles assessment four months after their hire date. Distribute

the same survey to employees who did not complete a learning styles assessment and who have been with the company for approximately one year.

4. Compile data regarding retention numbers four months after the initial learning styles assessment is administered.

Based on current research, it is hypothesized that there will be a strong correlation between employee engagement and employee retention. It is also hypothesized that a strong correlation will exist between one's educational attainment and engagement yet a weak correlation will exist between one's educational attainment and retention. It is hypothesized that a positive relationship will exist between the administration of learning styles assessments and employee engagement but a negative relationship will be discovered between the administration of learning styles assessments and employee retention due to factors that influence an employee to seek employment elsewhere such as a change in their demographics or their ability to seek other employment offers that may be more lucrative or that may have a more flexible schedule. Factors such as absenteeism and job performance issues can also contribute to poor retention numbers.

Description and Validity of the Instrumentation

This research was conducted using three separate instruments. The Index of Learning Styles (ILS) and Organizational Commitment Questionnaire (OCQ) were completed using a self-scoring, pencil and paper method. The third instrument was a questionnaire that was created by the investigator to gather demographic data from employees regarding their gender and educational attainment. The ILS and demographic data questionnaire were administered at the beginning of employment for newly hired employees. The OCQ and demographic data questionnaire were administered to two groups of employees: those who completed the ILS (four

months after their hire date) and those who have already been employed with the company for no more than one year and did not complete the ILS. Following is an overview of the instrumentation selection process including why the current learning styles assessment (Honey and Mumford Learning Styles Questionnaire) used by this training program was rejected for use in this study.

Before explanations are provided regarding learning styles assessments, it is necessary to define what constitutes learning styles. According to Keefe (1979), learning styles are defined as characteristic cognitive, affective, and psychological behaviors that are relatively stable indicators of how individuals perceive and interact with the learning environment. Assessments such as the Learning Styles Questionnaire and ILS are used in academic and corporate environments to gauge the possible approach students or employees will use when presented with new material that will increase knowledge or enhance job skills.

Honey and Mumford Learning Styles Questionnaire (LSQ)

Information collected from the LSQ is used to design or adapt learning activities for employees. As a result, trainers or instructors avoid using a repetitive training approach. Instructors can also avoid training experiences where mismatched learning activities and learning outcomes essentially derail the training goals of the training program. The LSQ has meta-learning applications and is often used by training programs in order to classify employees based on the following learning styles (it is expected for these styles to overlap): Activist, Reflector, Theorist, and Pragmatist. According to Swailes and Senior (1999), "The LSQ measures the strength of an individual's preference for each style to give an indication of the degree to which any learning style is preferred compared to the others" (p. 1).

The LSQ is popular with training and development programs due to the ease with which to administer it and decipher the results; however, its reliability and validity have not been assessed. Questions have also surfaced as to whether the LSQ is more a measure of personality rather than learning styles (Swailes & Senior, 1999). Data show that there is no support for the distinctions between the learning styles (Honey & Mumford, 1992) and that three of the learning styles show significant positive correlation. According to Swailes and Senior (1999), the Pragmatist and Theorist styles have a reported correlation of 0.54, and the Reflector and Theorist styles have a reported correlation of 0.71. Some discrepancy exists between the Activist and Theorist learning styles; while Honey and Mumford (1992) found them to be independent, Swailes and Senior (1999) found them to be negatively correlated.

According to a factor and cluster analysis, "over one-third of the scale items are not discriminating sufficiently between learning styles" (Swailes & Senior,1999, p. 9) resulting in the possibility that only three learning styles exist instead of the four that Honey and Mumford included: Pragmatist, Activist, and Reflector/Theorist (Swailes & Senior, 1999). Questions have also arisen regarding the scoring of the LSQ. According to Swailes and Senior (1999), "the scale scores do not appear distinctive enough to allow individuals to be categorized on the basis of their learning style profiles" (p. 9).

Index of Learning Styles (ILS)

Felder and Soloman's Index of Learning Styles (ILS) is based on the Felder-Silverman four-dimensional learning style model (referred to as the F-S model). The ILS was originally designed to assess learning style differences in engineering students in order to create a specialized teaching approach that addresses each learner's needs (Felder & Spurlin, 2005). The model and assessment were created to deter students from dropping or failing their classes. This

approach is applicable to a training environment within the teleconferencing industry where the

material being delivered to the employee is complicated and technical. Upon completion of the

ILS, individuals are aware of which dimension they operate within when in a learning

environment and training techniques can be adapted according to dominant and less dominant

learning styles. Table 4 shows the four dimensions of the F-S model as well as descriptions of

each dimension.

Table 4

Description of the Four Dimensions of the Felder-Silverman Model

Dimension	Description
Sensing/Intuitive	Sensing – likes to learn facts; solve problems using established methods; patient with details; practical.
	Intuitive – Discover relationships; like innovation; better able to grasp new concepts; dislike routine calculations and memorization.
Visual/Verbal	Visual – Remember best what they see; prefer diagrams and flow charts
	Verbal – Learn better when presented with words and spoken explanations.
Active/Reflective	Active – Learn best by applying new information, enjoy group work.
	Reflective – Think before they act, prefer to work alone
Sequential/Global	Sequential – gain understanding in linear, logical steps.
	Global – absorb material randomly under they get the big picture; difficulty explaining how they understand the big picture.

The ILS is a 44-question instrument that is completed online or on paper and is used to assess learning style preferences on the four-dimensions of the Felder-Silverman model (Felder & Spurlin, 2004). The results indicate possible learning style tendencies and it should be mentioned that the ILS does not define whether an individual is adept at performing particular job duties well. For each question, the individual is asked to choose between 'a' or 'b.' If completed online, once they have answered all 44 questions and submit the assessment, a profile will be sent back to them with scores regarding all four dimensions so the individual is aware of

their learning style tendencies within each dimension. It should be noted that the ILS assesses tendencies and does not act as a predictor of learning behavior. A brief explanation of each learning dimension is also included in the assessment (Felder & Spurlin, 2005). Links to resources are provided in order for the individual to learn more about the dimension that best represents them.

According to Felder and Spurlin (2005), "each learning style dimension has associated with it eleven forced-choice items, with each option (*a* or *b*) corresponding to one or the other category of the dimension" (p. 104). A score on a dimension is an integer ranging from 0 to 11 (Felder & Spurlin, 2005). The integers represent a preference for that dimension and the breakdown is as follows (using the sequential/global dimension as an example):

- 0 or 1 *a* responses – strong preference for global learning.

- 2 or 3 – a moderate preference for global learning.

- 4 or 5 – a mild preference for global learning.

- 6 or 7 – a mild preference for sequential learning.

- 8 or 9 – a moderate preference for sequential learning.

- 10 or 11 – a strong preference for sequential learning.

Validity and Reliability of the ILS

Several analyses have been carried out on the ILS to assess the level of reliability and validity with which scores from this instrument can be interpreted. According to Seery, Gaughran, and Waldmann (2003), test-retest reliability measurements were conducted in four week intervals and show that the reliability of the ILS scores was satisfactory. Other researchers also conducted test-retest measurements and produced similar results. Results of the test-retest

57

reliability measurements are shown in Table 5. To make Tables 5 and 6 easier to understand, the

four dimensions are represented as:

- A-R – Active-Reflective

- S-N – Sensory-Intuitive

- Vs-Vb – Visual-Verbal

- Sq-G – Sequential-Global

Table 5

Test-Retest Correlation and Coefficients of the ILS

Δt	A-R	S-N	Vs-Vb	Sq-G	N	References
4 wk.	0.804**	0.787**	0.870**	0.725**	46	Seery *et al.*
7 mo.	0.73*	.0.78*	0.68*	0.60*	24	Livesay *et al.*
8 mo.	0.683**	0.678**	0.511**	0.505**	124	Zywno *et al.*

*p<.05 **p<.01

Note. From "Applications, reliability and validity of the index of learning styles" by R.M. Felder

and J. Spurlin, 2005, *International Journal of Electrical Engineering Education, 21*(1), p.

103

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Internal consistency tests were also completed in order to measure the homogeneity of

the test items. Cronbach's coefficient alpha was used in order to determine if the quantity being

measured reflects a learning styles preference (Felder & Spurlin, 2005). According to Tuckman

(as cited in Feldman & Spurlin, 2005), "an alpha of 0.75 or greater is acceptable for instruments

that measure achievement and 0.5 or greater is acceptable for attitude assessments" (p. 107). The

criterion of $\alpha = 0.5$ was established for the ILS due to the measurement of one's attitude towards learning style preferences. According to Felder and Spurlin (2005), "we will accordingly take $\alpha = 0.5$ as the criterion of acceptability for the ILS" (p. 107). Table 6 shows the value of α from four different studies (Felder & Spurlin, 2005). Felder and Spurlin (2005) mention that the alpha value for the sequential-global dimension determined by Van Zwanenberg does not exceed the 0.5 criterion and his values are "consistently lower than those determined in other studies" (Felder & Spurlin, 2005, p. 107).

Table 6

Cronbach Alpha Coefficients for the ILS

A-R	S-N	Vs-Vb	Sq–G	N	Source
0.56	0.72	0.60	0.54	242	Livesay *et al.*
0.62	0.76	0.69	0.55	584	Spurlin
0.51	0.65	0.56	0.41	284	Van Zwanenberg *et al.*
0.60	0.70	0.63	0.53	557	Zwyno

Note. From "Applications, reliability and validity of the index of learning styles" by R.M. Felder

and J. Spurlin, 2005, *International Journal of Electrical Engineering Education, 21*(1), p.

103

Along with the above analyses, factor analyses were conducted to support the conclusion that the "ILS does not compromise the validity of the instrument for its principal intended purpose of designing a balanced instruction" (Felder & Spurlin, 2005, p. 110). Pearson correlation coefficients were also calculated in several studies to determine discriminant validity

and the values were consistently 0.2 or less with the exception of the sequential-global

dimension which ranged from 0.32 – 0.48 (Felder & Spurlin, 2005). According to Felder and

Spurlin (2005), "as long as the Index of Learning Styles is used to help students understand their

learning strengths and areas for improvement, our analysis and other published analyses suggest

that the current version of the instrument may be considered reliable, valid, and suitable"

(p. 111).

Organizational Commitment Questionnaire (OCQ)

Employee engagement and retention can be assessed by measuring the level of

commitment an employee has towards an organization. The OCQ provides results deemed

valuable by management as they gain insight into the levels of commitment their employees have

to an organization and the variables that affect commitment. According to Kanning and Hill

(2012), "the extent to which employees feel attached to their organization correlates significantly

with important variables of performance-related behavior" (para. 7).

Two questionnaires called the Organizational Commitment Questionnaire exist and are

used for researching employee engagement and for this particular research project. The

instrument created by Porter, Steers, Mowday, and Boulian in 1974 was not utilized. Their

instrument was constructed to measure employees' satisfaction and engagement within an

organization and was a 15-item instrument that did not differentiate between the different types

of organizational commitment that are represented in the OCQ used for this research (affective,

normative, and continual).

Originally, the OCQ (created by Meyer and Allen in 1984) proposed making distinctions

between the affective and continuance scale of commitment. Affective commitment signified a

sense of belonging or emotional attachment to the organization (Kanning & Hill, 2012). The

continuance commitment emphasized the perceived costs of leaving the organization (Kanning & Hill, 2012). In 1990, Allen and Meyer introduced a third component of commitment, the normative commitment scale, which reflected the perceived obligation one has when considering whether they will remain employed with the organization (Kanning & Hill, 2012). Later, Meyer, Allen, and Smith (1993) revised the normative commitment scale to elucidate the difference between affective commitment and normative commitment.

The OCQ is a self-scoring questionnaire and responses to each of the 6 items per scale (18 items total) are rated using a 7-point Likert scale with the following labels: 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = undecided, 5 = slightly agree, 6 = agree, 7 = strongly agree. According to Brown (2003), Allen and Meyer's (1990) measurement of the relationships between the commitment scales revealed:

> That the continuance commitment scale was relatively independent: affective (p < .001, r = .06) and normative (p < .001, r = .14). However, the correlations between the affective and normative scales were statistically significant and relatively strong (p < .001, r = .51). (p. 41)

Similar findings were reported by Cohen (1996): normative and affective (p < .001, r = .54), normative and continuance (non-significant, r = .06), and continuance and affective (non-significant, r = .02).

Several studies have examined the reliability (alphas) of scores from the OCQ. Allen and Meyer (1990) reported .87 for affective, .75 for continuance, and .79 for normative. Cohen (1996) reported alphas of .79 for affective, .69 for continuance, and .65 for normative. According to Brown (2003):

> Meyer et al. performed a meta-analysis of studies using both the 6-item and 8-item OCQ.

They collected data from people who had sought permission to use the OCQ during the last 15 years as well as from computer databases dating back to 1985. The mean reliability from all the studies was .82 for affective, .73 for continuance, and .76 for normative. (p. 41)

As previously stated, the OCQ, measures three scales of commitment and a more detailed description of each is provided below:

- Affective Commitment – Expresses the emotional attachment an employee has to the organization for which they work (Kanning & Hill, 2012). According to Allen and Meyer (1990), the affective component is built upon three aspects:

  1. The employee's belief in and acceptance of the goals and values set forth by the organization.

  2. The willingness to support the organization, especially during times of stress and uncertainty.

  3. The need of the employee to remain a recognized member of the organization.

- Normative Commitment – Focuses on the employee's attachment to an organization due to the fact that the organization economically supports the employee. This component also explores attachment from the perspective of the employee being assured that they will not weaken the organization further should they leave to work for a rival company during difficult times (Kanning & Hill, 2012).

- Continuous Commitment – Focuses on the employee's perceived barriers when resignation from the organization is being considered. Previous investments the employee has made in the organization, such as acquired knowledge or completing a

certification, will influence their decision to remain with an organization (Kanning & Hill, 2012).

Description of the Population

The population for this study consists of a sample of hourly paid teleconferencing employees who have been employed at a large teleconferencing center in the Southeast for no more than one year. These employees provide varying levels of customer service to customers from all over the globe. Prior to collecting data, the researcher provided an explanation of the study to the participants via an information letter (see Appendices C and D) as well as instructions for completing the ILS, OCQ, and demographic questionnaire. Participation was voluntary and the employee was given the option to opt out of the research study at any time with no consequences. No incentives were provided for any of the employees who participated in the research. Participation or lack of participation in this research had no influence on job performance assessments.

The demographic questionnaire and the ILS assessment were distributed to employees during scheduled training events and completion of these had no negative impact on the time frame in which these training events were to be conducted. The ILS and the demographic questionnaire were given concurrently to a total of seventy-one newly hired hourly employees. Sixty nine (97%) were female employees and two (3%) were male employees. The educational attainment of these employees ranged from acquiring a GED to earning a Bachelor's degree. It should be noted that the researcher originally had a larger population from which to gather data; during the time frame the data were gathered, a total of ninety-nine employees were hired and of

these potential research participants, twenty eight (28.2%) were released from new hire training for various infractions.

The OCQ was given to a total of 103 employees with no more than a year of service to the company and was completed during the employee's schedule with no negative impact to business needs. The OCQ was given two separate groups of employees. The first group consisted of 34 employees who did not take the ILS and who have been with the company for more than four months but less than a year. The second group consisted of 69 employees who completed the ILS during their new hire training. For the second group, the OCQ was given at or a couple days past these employees' four month anniversary of employment (when their probationary period ended). It was the goal of the researcher to acquire as many completed OCQ questionnaires from employees who have been employed with the company for approximately a year in order to match the number of completed ILS assessments (71) but due to the ongoing issues of employee retention, attrition, and lack of participation, there were 37 fewer (a 47% decrease) employees from this population sample (referenced above as the first group).

Analysis of Data

Confirmatory analysis was performed using SPSS version 22. Analysis of the research questions one and two was completed using a one-way ANOVA. Analysis of research question three was completed using a bivariate correlation and linear displays. Analysis of research questions four and five was completed using a one-way ANOVA. Results from the study are provided in Chapter 4.

Summary

This chapter covered the explanation of the instruments used as well as the organization of the study. The ILS, OCQ, and demographic questionnaire were used at a large

teleconferencing company with a call center located in the Southeast. This company has offices and call centers located around the world but this particular call center is the largest and has also experienced ongoing employee attrition and a lack of employee engagement based on internal engagement, hiring, and retention data. These instruments were chosen based on their validity and internal consistency and also for the ease with which they can be administered to employees. Data collected from these instruments will be used to alter training program content and create a learning environment that has an appropriate balance of pedagogical and andragogical teaching approaches. The research questions were developed to examine and compare responses regarding educational attainment and completion of a learning styles assessment and how those variables affect employee engagement and retention.

Results from the aforementioned instruments that determine one's learning style (ILS) and that measure employee engagement and retention (OCQ) will be explained in Chapter 4. Relationships discovered between the completion of a learning styles assessment and employee engagement and retention will be discussed along with whether there is a relationship between highest level of educational attainment and employee engagement and retention. Correlations will be included along with whether statistical significance was reached.

CHAPTER 4. RESULTS

This chapter explains the results based on the instrumentation provided to the sample population in this study. A thorough explanation of the statistical analyses used to determine hypothesized relationships is provided. Due to the similar structure and goal of the research questions, the questions were analyzed in the following groups: Questions 1 and 2 were analyzed using the same analyses, Question 3 was analyzed by itself, and Questions 4 and 5 were analyzed using the same analyses. A detailed description of the sample population that took part in this study will also be provided. .

Purpose of the Study

The purpose of this study was to expand upon existing research that delves into learning styles assessments and organizational commitment (Dalton, 1999; Fleming, 1987; Knowles, 1972; Kolb & Kolb, 1984; Maslow, 1943; Wechsler, 2008) and explore whether a teleconferencing company's assessment procedures can create an environment that is conducive for high levels of employee engagement and retention. An investigation was also completed to discover any possible relationships between educational attainment and employee engagement and employee retention. Data collected from this research will assist HR departments, training departments, and management teams to create best practices and alter working environments that are supportive and productive for employees who are new to the workforce and new to the company.

Research Questions

The instruments used in this study were designed to assess an employee's learning style and the results are then compared to an employee's feedback regarding their level of engagement (their commitment to the organization). Demographic data focusing on the highest level of education attained will also be taken into consideration when assessing employee engagement and retention. In addition, the following research questions were developed for the purpose of this study:

1. What is the relationship, if any, between the administration of learning styles assessments and employee engagement?

2. What is the relationship, if any, between the administration of learning styles assessments and employee retention?

3. What is the relationship, if any, between employee engagement and employee retention?

4. What is the relationship, if any, between educational attainment and employee engagement?

5. What is the relationship, if any, between educational attainment and employee retention?

Participants

The Index of Learning Styles (ILS) was administered to a sample of 71 newly hired employees at a teleconferencing center located in the Southeast during the first couple of weeks of their initial training. Of these participants, 2 (2.8%) were male and 69 (97.1%) were female. The educational classification of the groups was 8 (11.2%) earned a GED, 18 (25.3%) earned a

high school diploma, 21 (29.5%) attended some community college, 6 (8.4%) earned an Associate's degree, 11 (15.4%) attended a four-year institution but did not attain a degree, 4 (5.6%) earned a four-year (Bachelor's) degree, and 3 (4.2%) attended an online or distance program and earned a certification.

The Organizational Commitment Questionnaire (OCQ) was administered to a total of 103 employees and completed questionnaires were divided into two groups; 34 employees who have been with the company for more than four months but not for more than one year; this group of employees did not complete the ILS. The other group of employees consisted of 69 employees who completed the ILS during their new hire training program and subsequently completed the OCQ during the fourth month of their employment with the organization (when their initial probationary period ended). Of the total participants, 9 (11%) were male and 94 (89%) were female.

Regarding the OCQ, the educational classification of all the participants was: 2 participants (1%) earned a GED, 19 (18%) earned a high school diploma, 46 (45%) attended some community college, 7 (7%) earned an Associate's degree, 14 (14%) attended a four-year institution but did not attain a degree, 9 (9%) earned a four-year (Bachelor's) degree, 3 (3%) attended an online or distance program and earned a certification, and 3 (3%) attended an online or distance program and earned a degree. Due to the disparity between these numbers, these categories were collapsed and combined into the following: GED/HS (combining GED and high school diploma) 21 (20%), DegreeCert (earned an Associate's or Bachelor's degree or an online degree or certification) 21 (20%), and SomeCollege (attended some community college/four year institution) 61 (59%).

Measures

A demographic questionnaire was given to all the employees who completed the ILS and the OCQ. The questionnaire consisted of two questions both of which had a multiple choice response. The first question asked the employee if they were male or female and the second question asked them to identify their highest level of education. The choices for this question were: GED, high school diploma, attended some community college, earned an Associates' degree, attended a four-year institution but did not attain a degree, earned a four-year (Bachelor's) degree, attended an online or distance program and earned a certification, attended an online or distance program and earned a degree.

The ILS, which consisted of 44 items, was used to assess an employee's learning style and those results were taken into consideration by operations trainers when planning and conducting training classes. The results of the ILS regarding the dimension within which the employee operated were not included in this investigation. The learning styles (referred to as dimensions) were divided into four categories. The responses consisted of choosing "a" or "b" next to the statement that best applied to the individual completing the assessment. The four learning styles (dimensions) are defined as follows:

1. Sensing/Intuitive: Sensing – likes to learn facts; solve problems using established methods; patient with details; practical. Intuitive – Discover relationships; like innovation; better able to grasp new concepts; dislike routine calculations and memorization.

2. Visual/Verbal: Visual – Remember best what they see; prefer diagrams and flow charts. Verbal – Learn better when presented with words and spoken explanations.

69

3. Active/Reflective: Active – Learn best by applying new information, enjoy group work. Reflective – Think before they act, prefer to work alone.

4. Sequential/Global: Sequential – gain understanding in linear, logical steps. Global – absorb material randomly under they get the big picture; difficulty explaining how they understand the big picture.

The OCQ, which consisted of 18 items, was used to measure an employee's commitment to the organization. The 18 items were divided into three domain scales. The response scale progressed from a rating of 1, which represented *Strongly Disagree*, to a rating of 7, which represented *Strongly Agree*. Each domain scale will be considered when analyzing the relationship between the data gathered from the ILS, OCQ, and the demographic questionnaire. The three domain scales are defined as follows:

1. Affective Commitment – Expresses the emotional attachment an employee has to the organization for which they work (Kanning & Hill, 2012).

2. Normative Commitment – Focuses on the employee's attachment to an organization due to the fact that the organization economically supports the employee.

3. Continuous Commitment – Focuses on the employee's perceived barriers when resignation from the organization is being considered.

Sample Specific Reliability

Reliability analyses were conducted to test that the ILS results and OCQ scales provided accurate measurements. Analyses were not necessary for the demographic questionnaire. Regarding the ILS, a Cronbach's coefficient alpha was used in order to determine if the quantity being measured reflects a learning styles preference (Felder & Spurlin, 2004). The criterion of $\alpha = 0.5$ was established due to the measurement of one's attitude towards learning style

preferences. Table 7 shows the value of α from four different studies (Felder & Spurlin, 2005).

Felder and Spurlin (2005) mention that the alpha value for the sequential-global dimension

determined by Van Zwanenberg does not exceed the 0.5 criterion and his values are

"consistently lower than those determined in other studies" (Felder & Spurlin, 2005, p. 107).

Table 7

Sample Specific Reliability - Alpha Coefficients for the ILS

A-R	S-N	Vs-Vb	Sq–G	N	Source
0.56	0.72	0.60	0.54	242	Livesay *et al.*
0.62	0.76	0.69	0.55	584	Spurlin
0.51	0.65	0.56	0.41	284	Van Zwanenberg *et al.*
0.60	0.70	0.63	0.53	557	Zwyno

Note. From "Applications, reliability and validity of the index of learning styles" by R.M. Felder

and J. Spurlin, 2005, *International Journal of Electrical Engineering Education, 21*(1), p.

103

Regarding the OCQ, according to Brown (2003), reliability and validity measures for the

relationships between the commitment scales in the OCQ revealed:

That the continuance commitment scale was relatively independent: affective ($p < .001$,

$r = . 06$) and normative ($p < .001$, $r = .14$). However, the correlations between the

affective and normative scales were statistically significant and relatively strong ($p <$

$.001$, $r = .51$). (p. 41)

Several studies have examined the reliability (alphas) of the OCQ. Allen and Meyer (1990) reported .87 for affective, .75 for continuance, and .79 for normative. Cohen (1996) reported alphas of .79 for affective, .69 for continuance, and .65 for normative. According to Brown (2003):

> Meyer et al. performed a meta-analysis of studies using both the 6-item and 8-item OCQ. They collected data from people who had sought permission to use the OCQ during the last 15 years as well as from computer databases dating back to 1985. The mean reliability from all the studies was .82 for affective, .73 for continuance, and .76 for normative. (p. 41)

Analysis of Research Questions 1 and 2

Research Question 1

Research Question 1 asked, "What is the relationship, if any, between the administration of learning styles assessments and employee engagement?" Due to the nature of this research question, employee engagement is operationalized through the Affective Commitment scale of the OCQ and the affective scale will be the only scale considered for this question. The Affective Commitment scale measures an employee's emotional attachment to an organization (Kanning & Hill, 2012). According to Allen and Meyer (1990), the Affective component is built upon three aspects:

- The employee's belief in and acceptance of the goals and values set forth by the organization.
- The willingness to support the organization, especially during times of stress and uncertainty.
- The need of the employee to remain a recognized member of the organization.

72

Data Analysis – Question 1

Prior to conducting statistical analyses, responses to questions 3, 4, and 5 within the

Affective Commitment scale of the OCQ were reverse coded and all responses for this scale

were subsequently averaged per individual. A one-way ANOVA was used to measure the

strength of the relationship between the completion of the ILS and employee engagement

represented by this scale of the OCQ. A statistically significant difference between groups was

not reached ($F(1,101) = 2.199$, $p = .141$) (See Table 8). Levene's Test of Homogeneity indicated

that the variances were not statistically significantly different thus the homogeneity of variance

assumption related to the population was not violated in the sample (see Table 9).

Table 8

One-way Analysis of Variance of Completion of the ILS and the Effects on Employee

Engagement (Affective Scale of the OCQ)

Source	Df	SS	MS	F	p	eta	eta^2
Between groups	1	3.106	3.106	2.19	.141		
Within groups	101	142.666	1.413				
Total	102	145.772				.146	.021

Table 9

Levene's Test of Homogeneity of Variance Question 1

Levene Statistic	df1	df2	Sig
1.009	1	101	.318

Research Question 2

Research Question 2 asked, "What is the relationship, if any, between the administration of learning styles assessments and employee retention?" Due to the nature of this research question, employee retention is operationalized through the Normative Commitment scale of the OCQ. According to Kanning and Hill (2012), the Normative Commitment scale focuses on the employee's attachment to an organization due to the fact that the organization economically supports the employee. This component also explores attachment from the perspective of the employee being assured that they will not weaken the organization should they leave to work for a rival company.

Data Analysis – Question 2

      Prior to conducting statistical analyses, responses to Question 1 within the Normative

Commitment scale of the OCQ were reverse coded and all responses were subsequently

averaged per individual. A one way ANOVA was used to measure the strength of the

relationship between the completion of the ILS and employee retention represented by the

Normative Commitment scale. A statistically significant difference between groups was not

reached (F(1,101) = .062, *p* = .804) (see Table 10). Levene's Test of Homogeneity indicated that

the variances were not statistically significantly different thus the homogeneity of variance

assumption related to the population was not violated in the sample (see Table 11).

Table 10

One-way Analysis of Variance of Completion of the ILS and the Effects on Employee Retention

(Normative scale of the OCQ)

Source	df	SS	MS	F	P	eta	eta^2
Between groups	1	.083	0.83	.062	.804		
Within groups	101	136.218	1.349				
Total	102	136.302				.025	.001

Table 11

Levene's Test of Homogeneity of Variance Question 2

Levene Statistic	df1	df2	Sig
1.009	1	101	.299

Analysis of Research Question 3

Research Question 3 was, "What is the relationship, if any, between employee engagement and employee retention?" The Affective Commitment scale within the OCQ, which measures employee engagement, was compared to the Normative Commitment and the Continuance Commitment scales, both of which measure different concepts of employee retention. For the purposes of this research, the responses to the questions within each scale were averaged and these averages were used in the analysis of this question. The comparison of the Affective Commitment scale to the other scales was completed to determine intercorrelations and strength of a relationship between engagement and retention. To measure the strength of these relationships, bivariate (Pearson) correlation was conducted using the Affective and Normative Commitment scales (Table 12) and Affective and Continuance Commitment scales (Table 13). Figures 4 and 5 display the linear relationships between the Affective and Normative scales and the Affective and Continuance scales. To fully satisfy this research question, Table 13 displays bivariate correlations between the three commitment scales in the OCQ.

As indicated by Table 12 and Figure 3, correlations between the Affective and Normative scales were positive but moderate. Statistical significance was reached for these two scales ($p = .00$). As indicated by Table 13 and Figure 4, correlations between the Affective and Continuance scales were positive but weak. Statistical significance was not reached for these two scales ($p = .429$).

Table 12

Bivariate Correlations for the Affective and Normative Scales in the OCQ

		Affective	Normative	N
Affective	Pearson	1	.512	103
	Sig (2-tailed)		.000	
Normative	Pearson	.512		103
	Sig (2-tailed)	.000		
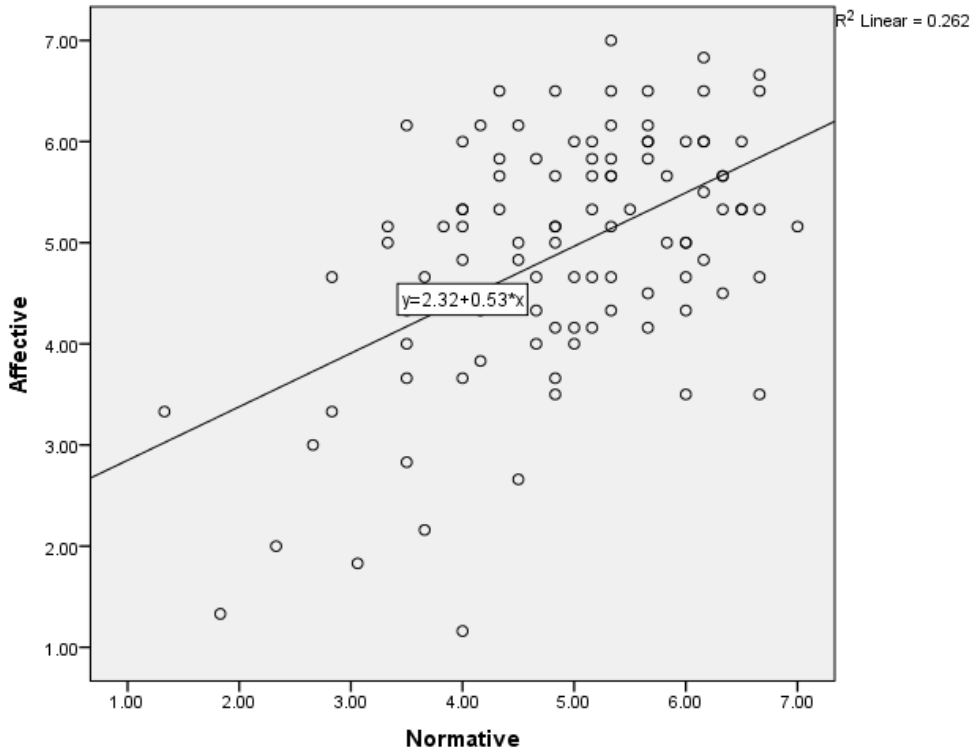
Figure 3. Linear Relationships for the Affective and Normative

Table 13

Bivariate Correlations for the Affective and Continuance Scales in the OCQ

		Affective	Continuance	N
Affective	Pearson	1	.079	103
	Sig (2-tailed)		.429	
Continuance	Pearson	.079		103
	Sig (2-tailed)	.429		
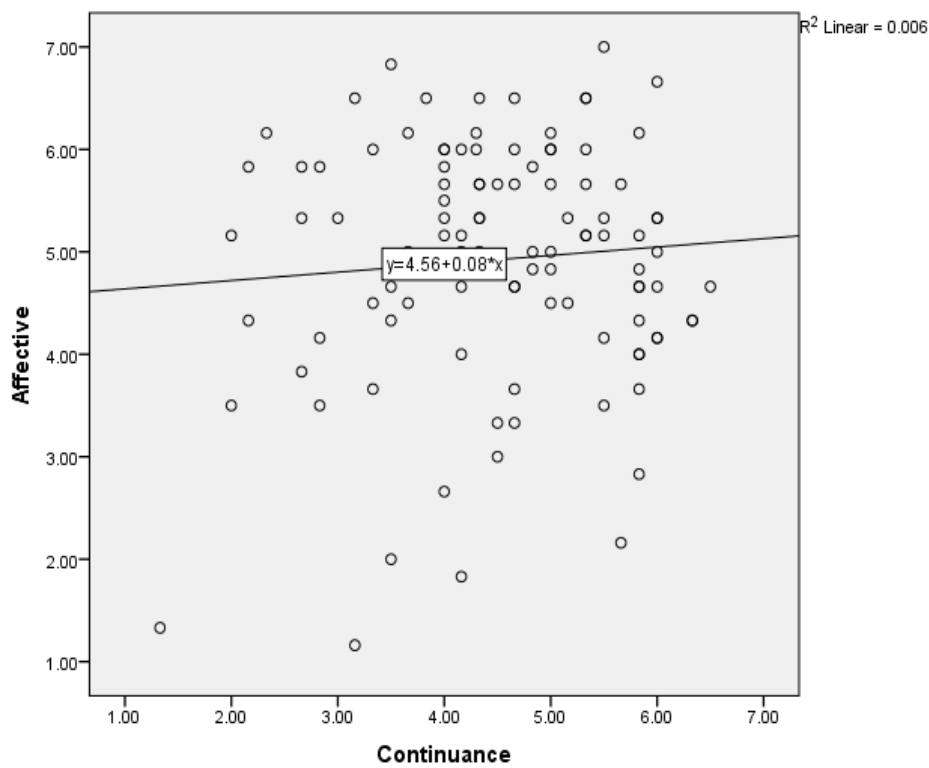
Figure 4. Linear Relationships for the Affective and Continuance Scales

To fully satisfy Research Question 3, Table 14 displays bivariate correlations between the three commitment scales in the OCQ. Statistical significance was reached between the Normative and Continuance Commitment ($p = .046$) scales suggesting that a positive relationship exists between these two concepts of organizational commitment.

Table 14

Bivariate Correlations for the Affective, Normative, and Continuance Scales

		Normative	Continuance	Affective	N
Normative	Pearson	1	.197	.512	103
	Sig (2-tailed)		.046	.000	
Continuance	Pearson	.197	1	.079	103
	Sig (2-tailed)	.046		.429	
Affective	Pearson	.512	.079	1	103
	Sig (2-tailed)	.000	.429		

Analysis of Research Questions 4 and 5

Research Question 4 was, "What is the relationship, if any, between educational attainment and employee engagement?" and Research Question 5 was, "What is the relationship, if any, between educational attainment and employee retention?"

Data Analysis – Questions 4 and 5

A one-way ANOVA with follow-up pair-wise comparisons was conducted to assess if educational attainment affected hourly employees' level of Affective and Normative commitment to their organization as operationalized by the OCQ. For the purposes of this

research, the responses to the questions within each scale were averaged and these averages were used in the analysis of these research questions. Employee engagement is operationalized through the Affective scale of the OCQ and employee retention is operationalized through the Normative scale of the OCQ. Originally, educational attainment contained eight categories: GED, high school diploma, attended some community college, earned an Associate's degree, attended a four year institution but did not attain a degree, earned a Bachelor's degree, attended an online or distance program and earned a certification, and attended an online or distance program and earned a degree. These categories have been collapsed into the following data sets due to the disparity in numbers between these categories: GED/HS (combining GED and high school diploma), DegreeCert (earned an Associate's or Bachelor's degree or a certification), and SomeCollege (attended some community college/four year institution).

Results

Affective

A one-way between subjects ANOVA was conducted to compare the effect of educational attainment on employee engagement as operationalized by the Affective scale of the OCQ. Educational attainment has three levels: GED/HS, DegreeCert, and SomeCollege. The results, presented in Table 15, indicated that there was not a statistically significant effect of IV educational attainment on DV employee engagement (affective) at the $p < .05$ level for the three conditions [$F(2, 100) = .925$, $p = .400$]. Because a statistically significant result was not found, a post hoc test was not conducted. Taken together, these results suggest that one's level of educational attainment does not have a strong effect on employee engagement.

Table 15

ANOVA for Educational Attainment and the Affective Scale of the OCQ

	Df	SS	M	F	Sig	eta	eta^2
Between Groups	2	2.65	1.317	.925	.400		
Within Groups	100	142.398	1.424				
Total	102	145.033				.135	.018

Table 16

Means and Standard Deviations for the Affective Scale Items by Level of Educational Attainment

EduAttainment	*N*	M	SD
GED/HS	21	4.886	1.19
DegreeCert	21	4.457	1.20
SomeCollege	61	4.504	1.186
Total	103	4.572	1.192

Normative

A one-way between subjects ANOVA was conducted to compare the effect of educational attainment on employee retention as operationalized by the Normative scale of the OCQ. The results, presented in Table 17, indicated that there was not a statistically significant effect of IV educational attainment on DV employee retention (Normative) at the $p < .05$ level for the three conditions [$F(2, 100) = .223$, $p = .800$]. Because a statistically significant result was not found, a post hoc test was not conducted. Taken together, these results suggest that one's level of educational attainment does not have a strong effect on employee retention.

81

Table 17

ANOVA for Educational Attainment and the Normative Scale of the OCQ

	Df	SS	M	F	Sig	eta	eta^2
Between Groups	2	.613	.306	.223	.800		
Within Groups	100	137.272	1.373				
Total	102	137.884				.067	.004

Table 18

Means and Standard Deviations for the Normative Scale Items by Level of Educational

Attainment

EduAttainment	*N*	M	SD
GED/HS	21	4.886	1.198
DegreeCert	21	4.457	1.208
SomeCollege	61	4.504	1.186
Total	103	4.572	1.192

Summary

Reliability analyses were conducted to determine whether the instruments used in this investigation satisfy the research questions put forth by the investigator and to ensure that the ILS and OCQ scales provided accurate measurements. Analyses were not necessary for the demographic questionnaire. Regarding the ILS, a Cronbach's coefficient alpha was used in order to determine if the quantity being measured reflects a learning styles preference (Felder & Spurlin, 2004). Factor analyses were conducted and align with the other analyses to support the

conclusion that the "ILS does not compromise the validity of the instrument for its principal intended purpose of designing a balanced instruction" (Felder & Spurlin, 2005, p. 110).

A one-way ANOVA was used to measure the strength of the relationship between the completion of the ILS and employee engagement represented by the Affective scale of the OCQ. There was not a statistically significant difference between groups as determined by a one-way ANOVA ($p = .141$). A one way ANOVA was also used to measure the strength of the relationship between the completion of the ILS and employee retention represented by the Normative scale. There was not a statistically significant difference between groups as determined by a one-way ANOVA ($p = .804$).

To measure the strength of these relationships between employee engagement and retention, a bivariate (Pearson) correlation was conducted using the Affective and Normative Commitment scales and Affective and Continuance Commitment scales. To fully satisfy this research question, bivariate correlations were conducted between the three commitment scales in the OCQ. Correlations between the Affective and Normative Commitment scales were positive but moderate. Statistical significance was reached for these two scales ($p \leq .001$). Correlations between the Affective and Continuance Commitment scales were positive but weak. Statistical significance was not reached for these two scales ($p = .429$).

A one-way between subjects ANOVA was conducted to compare the effect of educational attainment on employee engagement as operationalized by the Affective Commitment scale of the OCQ. The results indicated that there was not a statistically significant effect of educational attainment on employee engagement ($p = .400$). A one-way between subjects ANOVA was conducted to compare the effect of educational attainment on employee retention as operationalized by the Normative Commitment scale of the OCQ. The results

indicated that there was not a statistically significant effect between educational attainment on employee retention (p = .800). Because statistically significant results were not found, a post hoc test was not conducted for either scale. Taken together, these results suggest that one's level of educational attainment does not have a strong effect on employee engagement or retention. Statistical significance was not reached as originally hoped suggesting that different factors outside of learning styles assessment and level of educational attainment are responsible for engagement and retention issues within this particular teleconferencing center.

Chapter 5 will address how these results affect the particular teleconferencing center along with the implications for the teleconferencing industry in general. Due to statistically significant results not being reached in several instances, suggestions are provided for why significance was not reach. Research possibilities are included in order to expand this research so other sample populations are provided with these instruments and results are garnered based on either the same set of research questions or a different set.

CHAPTER 5. IMPLICATIONS, RECOMMENDATIONS, AND SUMMARY

This chapter provides a summary of the results from each research question and how the results were obtained. Explanations of how the results of this study affect the culture of this industry (specifically, this organization) are provided along with how personnel within this industry can use these results in a positive way to implement hiring, training, and managerial style changes. Recommendations for further study are provided for those who wish to replicate this study within this organization or who wish to use these instruments in customer service-based industries who also experience employee engagement and retention issues.

Purpose of the Study

The purpose of this study was to expand upon existing research that delves into learning styles assessments and organizational commitment (Dalton, 1999; Fleming, 1987; Knowles, 1972; Kolb & Kolb, 1984; Maslow, 1943; Wechsler, 2008) and explore whether a teleconferencing company's assessment procedures can create an environment that is conducive for high levels of employee engagement and retention. An investigation was also completed to discover any possible relationships between educational attainment and employee engagement and employee retention. Data collected from this research will assist HR departments, training departments, and management teams to create best practices and alter working environments that are supportive and productive for employees who are new to the workforce and new to the company.

Research Questions

The instruments used in this study were designed to assess an employee's learning style and the results are then compared to an employee's feedback regarding their level of engagement (their commitment to the organization). Demographic data focusing on the highest level of education attained will also be taken into consideration when assessing employee engagement and retention. In addition, the following research questions were developed for the purpose of this study:

1. What is the relationship, if any, between the administration of learning styles assessments and employee engagement?

2. What is the relationship, if any, between the administration of learning styles assessments and employee retention?

3. What is the relationship, if any, between employee engagement and employee retention?

4. What is the relationship, if any, between educational attainment and employee engagement?

5. What is the relationship, if any, between educational attainment and employee retention?

Introduction

The first objective of this research was to find possible relationships between the administration of a learning styles assessment and employee engagement and retention. The second objective of this research was to determine if employee engagement had a strong relationship with employee retention. The third objective was to determine if level of

educational attainment affects employee engagement and retention. The importance of these

relationships was initiated through a review of literature and the establishment of a theoretical

framework to support the importance of employee engagement and retention in industries that

employ large numbers of hourly paid employees and who report high attrition rates within this

population.

The instruments for the investigation were chosen due to their reliability, validity, and the

ease with which they can be administered and assessed within a training program. They were

also chosen due to the ease with which hourly employees understood the content. The data

obtained from the completion of the learning styles assessment and the effects on employee

engagement and retention were analyzed to address the hypotheses set forth by the investigator

and to address the research questions. The three commitment scales measured by the OCQ were

used to measure employee engagement and retention: affective (engagement), continuance

(retention), and normative (retention).

Implications of the Study and Discussion

A one-way ANOVA was used to measure the strength of the relationship between the

completion of the ILS and employee engagement represented by the Affective Commitment

scale of the OCQ. The results of this analysis did not yield statistical significant therefore it can

be concluded that the completion of a learning styles assessment is not a factor in strengthening

employees' level of engagement to their organization. This result differs from the outcome

hypothesized by the researcher as a positive relationship between the completion of a learning

styles assessment and employee engagement was expected. However, this result does not

diminish the importance of learning styles assessments being administered during one's training;

instead, this result suggests that training departments can utilize the information garnered from

learning styles assessments in a more productive manner. Employees need to see connections

between the completion of an assessment and applications to their professional development.

A one way ANOVA was also used to measure the strength of the relationship between

the completion of the ILS and employee retention represented by the Normative Commitment

scale. As predicted by the researcher, the results of this analysis also did not yield statistical

significant therefore it can be concluded that the completion of a learning styles assessment is

not a factor in determining employees' level of commitment (retention) to their organization.

This result suggests that other factors are deemed more important by the employee when he/she

decides to continue or terminate their employment with this organization. Factors such as

compensation and benefits could outweigh the benefits of learning styles assessments and their

contribution to professional growth and more research is recommended in this area as there is an

opportunity to better utilize the results from a learning styles assessment and perhaps this

organization is not fully capitalizing on these possibilities.

Relationships between the three commitment scales of the OCQ were measured in order

to determine how strongly related employee engagement and employee retention were based on

the employees' responses to the OCQ. The relationship between the Affective and Normative

Commitment scales was assessed first followed by the relationship between the Affective and

Continuance Commitment scales. The results of these analyses suggest that a moderate positive

relationship exists between an employee's emotional attachment (Affective) and loyalty to their

organization (Normative) and statistical significance was reached for this relationship. This

result is parallel to the researcher's prediction that there will be a strong relationship between

these two scales. The results of the analyses also suggest that an employee's emotional

attachment (Affective) has a weak positive relationship with the perceived costs of leaving the

organization (Continuance). This result was accurately predicted by the researcher. Statistical significance was also reached when determining the strength of the relationship between one's perception of loyalty to the company (Normative) and their perceived costs of leaving the organization (Continuance).

Having determined that the instrument which measured employee engagement and retention was appropriate for assessing different types of organizational commitment, responses to this instrument were compared to one's level of educational attainment. A one-way ANOVA was conducted to determine if one's highest level of educational attainment affected the way in which they feel committed to the organization operationalized through two of the three scales (Affective and Normative) of organizational commitment specified in research questions 4 and 5. The analysis of variance did not reveal a statistically significant difference between the different levels of educational attainment and employee engagement or retention.

One explanation for the results regarding educational attainment and level of engagement is that the group of respondents felt a strong sense of P-O fit regardless of their educational level as job skill level is assessed when applicants seek these jobs as opposed to educational credentials. Another explanation focuses on adaptation-innovation theory as employees may quickly develop strong problem solving skills due to the tasks that define their position thus making them more connected to their environment regardless of their prior educational achievements. This information will be helpful to the organization where the research took place as it was discussed that certain educational requirements must be met before positions are filled or promotions are granted.

Information regarding learning styles assessments and educational attainment can be factored into training program development and job placement strategies but are not strong

indicators of employees' level of engagement and retention as previously thought. The

theoretical framework presented in Chapter 2 is an ideal framework for environments such as

these where there is a large hourly employee base, and training departments, along with

Management teams, are tasked with developing employees who are critical thinkers and problem

solvers while maintaining a holistic view of the employee as a person who will develop

emotional and financial attachments to the organization.

<p align="center">**Recommendations for Further Study**</p>

For the purposes of improving training programs and increasing employee engagement

and retention, it would be useful to determine how applicable the ILS and OCQ are for hourly

employees who have been employed for more than one year and are considered tenured. These

instruments could determine if employees with a longer duration of employment are motivated to

seek higher status positions within the company or are content to remain in their current position.

These instruments are also applicable to other types of service industries that may experience

frequent employee turnover, such as the retail or restaurant industry. It would be helpful to apply

the responses garnered from these instruments to determine if continuing education opportunities

would result in stronger levels of employee engagement and retention. It would also be helpful

to include a survey that focused on employee satisfaction with a focus on compensation and

benefits.

Due to the geographical location of this teleconferencing center, a homogenous employee

base is evident as many of these employees are from the vicinity of where this organization is

located and often do not have aspirations to leave the area. It would be interesting to apply these

research questions in other business units located in different regions where ethnic and cultural

differences are more abundant and where there is strong competition between employers. This

<p align="center">90</p>

would determine whether cultural differences or a variety of employment opportunities garner different results when assessing one's perceived levels of engagement to an organization.

Questionnaires such as the OCQ help determine if relationships exist between ones self-reported level of engagement and commitment and it was helpful to discover that one's level of educational attainment does not have a strong effect on engagement and retention. As a result, other factors affecting engagement and retention can be considered in order to determine what creates a strong relationship between the employee and this particular organization. This result can also begin the process of removing stigmas associated with lower levels of education. The three scales of commitment in this research project exposed relationships that were anticipated by the researcher; for example, there was a statistically significant relationship between one's perceived loyalty to the company and their need to stay with the company suggesting that a moderate commitment from a financial aspect (need) created an emotional attachment to the organization. Perhaps the organization can take advantage of this relationship and create growth opportunities for the employee resulting in stronger levels of engagement and more consistent levels of retention.

Summary

A large portion of adult learning takes place within workforce training programs and these programs could be the only post-secondary learning opportunities for employees who have limited job skills and education. The teleconferencing industry can greatly benefit from developing a robust training program for incoming employees in order to help them develop into members of an organization who are engaged in the company's culture and have a deep sense of commitment to their organization. This current study revealed that the administration of learning styles assessments and one's level of educational attainment do not significantly contribute to

91

employee engagement and retention, yet the importance of learning styles assessments cannot be overlooked as they assist with program planning and learning outcome assessments. Perhaps learning styles assessments can be explained in such a way that employees better connect them to job success and personal development and have an understanding of their ongoing purpose. It is also advisable for the Management team within this organization to become more involved with the assessment processes of their employees. This research exposed gaps between the organization and employee development yet this exposure creates opportunities for the organization to devote energy into appropriate area of potential growth for its employees.

This study provides valuable insight into an industry that employs a large number of hourly employees and suffers from retention issues with employees who have been employed for less than a year. As this research reveals, completion of a learning styles assessment and one's educational attainment do not significantly contribute to a strong sense of employee engagement or higher levels of employee retention; yet, opportunities are now created as a result of this research. Training programs can use the information garnered from learning styles assessments and incorporate them into ongoing teaching opportunities that extend beyond a training department. Using educational attainment data, HR departments can create opportunities for continuing education in order to create a more educated employee base resulting in a pool of highly skilled internal job candidates which can result in better retention numbers. Further investigation into the organizational culture would most likely reveal telling reasons (such as compensation issues) as to why non-tenured employees do not feel engaged to this organization yet remain employed only to due to a lack of employment opportunities elsewhere. This research can be utilized as a framework for continuing this investigation using the same

92

population of employees but incorporating different instruments in order to evaluate a different

set of hypotheses.

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94

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EMPLOYEE ATTRITION DATA

ID	Rehire Dt	Term Date	Reason
2115485	3/14/2012	8/11/2015	Invol Policy Viol / Misconduct
2518462	7/16/2014	7/31/2015	Voluntary Resign w/ Notice
2528846	11/5/2014	8/17/2015	Voluntary Resign w/o Notice
2542951	4/8/2015	8/17/2015	Voluntary Resign w/o Notice
2544899	5/29/2015	8/25/2015	Invol Job Abandonment
2554709	8/19/2015	8/25/2015	Invol Production Training
2554710	8/19/2015	8/28/2015	Invol Attendance
2121184	1/30/2006	8/19/2015	Invol Fail Drug Tst/Time Exp
2531391	12/8/2014	7/31/2015	Voluntary Resign w/ Notice
2115313	10/26/1999	7/31/2015	Voluntary Resign w/ Notice
2115471	4/5/2004	8/2/2015	Voluntary Resign w/o Notice
2185355	12/31/2008	8/6/2015	Voluntary Resign w/o Notice
2191502	9/28/2009	8/3/2015	Invol Attendance
2266660	12/3/2007	7/31/2015	Voluntary Resign w/o Notice
2430767	8/1/2014	8/7/2015	Voluntary Resign w/ Notice
2468844	12/2/2014	8/13/2015	Voluntary Resign w/o Notice
2476403	5/26/2015	8/14/2015	Invol Attendance
2488837	7/23/2013	8/14/2015	Voluntary Resign w/ Notice
2493746	9/17/2013	8/10/2015	Voluntary Resign w/o Notice
2497844	10/22/2013	8/6/2015	Voluntary Resign w/ Notice
2497861	11/11/2013	8/10/2015	Voluntary Resign w/o Notice
2499859	11/5/2013	8/25/2015	Voluntary Resign w/o Notice
2518488	7/15/2014	8/26/2015	Voluntary Resign w/ Notice
2526693	10/14/2014	8/5/2015	Voluntary Resign w/ Notice

ID	Rehire Dt	Term Date	Reason
2527317	10/21/2014	8/10/2015	Voluntary Resign w/o Notice
2534758	1/13/2015	8/5/2015	Voluntary Resign w/o Notice
2534911	1/13/2015	8/13/2015	Voluntary Resign w/ Notice
2538312	2/17/2015	8/25/2015	Voluntary Resign w/o Notice
2539905	3/3/2015	8/17/2015	Invol Attendance
2546646	5/26/2015	8/7/2015	Voluntary Resign w/ Notice
2546670	5/26/2015	8/21/2015	Voluntary Resign w/o Notice
2546736	5/26/2015	8/21/2015	Voluntary Resign w/ Notice
2546896	5/26/2015	8/9/2015	Voluntary Resign w/o Notice
2548313	6/10/2015	8/18/2015	Voluntary Resign w/o Notice
2551728	7/21/2015	8/5/2015	Invol Production Training
2553043	8/4/2015	8/4/2015	Voluntary Resign w/ Notice
2553090	8/4/2015	8/20/2015	Invol Policy Viol / Misconduct
2553153	8/4/2015	8/19/2015	Voluntary Production Training
2553166	8/4/2015	8/9/2015	Invol Job Abandonment
2553634	8/11/2015	8/18/2015	Invol Production Training
2553655	8/11/2015	8/21/2015	Invol Production Training
2277843	1/14/2008	8/21/2015	Voluntary Resign w/ Notice

Skill	Hourly Cost per class (including training and agent hourly pay)				
	ASPT BM	**ASPT CC**	**Lead**	**Reservations**	**Acct. Mgmt.**
Prep for NH	$75	$75	$75	$180	$180
Entermode	$3,167	$3,167	$2,964		
Total to Entermode Skill	$3,242	$3,242	$3,039		
Prep for Bridge Monitor	$150	$7.50	$7.50		
Bridge Monitor	$4,872	$487	$2,280		
Total to Bridge Monitor Skill	$8,264	N/A	N/A		
Prep for Court Call	$150	$150	$150		
Court Call	$1,827	$4,872	$4,560		
Total to Court Call Skill	N/A	$8,264	N/A		
Prep for CommLine	$7.50	$7.50	$7.50		
CommLine	$366	$366	$2,280		
Total to Lead Skill	$10,614.50	$9,132	$12,324		
Prep for Event Training	$75	$75	$75		
Event	$7,308	$7,308	$1,218		
Total to Event Skill	$17,997.50	$16,515	$13,617		
Prep for Sr. Event Training	$60	$60	$60		
Sr. Event	$2,436	$2,436	$2,436		
Total to Sr. Event Skill	$20,493.50	$19,011	$16,113		
Prep for Sr. Event "Beta" Training	$7.50	$7.50	$7.50		
Sr. Event "Beta"	$545	$545	$545		
Total to Sr. Event "Beta" Skill	$21,046	$19,563.50	$16,665.50		
Prep for Expert Training	$75	$75	$75		
Expert	$3,528	$3,528	$3,528		
Total to Expert Skill	$24,649	$23,166.50	$20,268.50		
Event Specialist		Tenure only			
Reservations New Hire				$7,410	$7,950
Total to Reservations Release				$7,590	N/A
Account Mgmt. New Hire				N/A	$1,590
Total to Customer Care Release				N/A	$9,720

APPENDIX C

INFORMATION LETTER – LEARNING STYLES ASSESSMENT

INFORMATION LETTER

For a Research Study entitled

"An Investigation of the Administration of Learning Styles Assessments and Educational Attainment among Hourly Employees and the Effects on Employee Engagement and Retention"

You are invited to participate in a research study to provide information about your preferred learning style(s) and their effects on your level of employee engagement. This study will also include information about your level of education and whether that variable affects employee engagement and retention. The study is being conducted by Kate Nelson in the Auburn University Department of Educational Foundations, Leadership, and Technology. She also works in the Training Department at InterCall as the Speech and Training Analyst for the company. Her research is being conducted under the direction of Dr. James Witte in the Auburn University Department of Educational Foundations, Leadership, and Technology. You are invited to participate because you have been employed with InterCall for no more than one year, are an hourly paid employee, and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete a demographic questionnaire regarding your educational attainment (paper and pen), a learning styles assessment (paper and pen), and a questionnaire regarding your level of employee engagement. Your total time commitment will be approximately 45 minutes.

Are there any risks or discomforts? The risks associated with participating in this study are: None.

Are there any benefits to yourself or others? If you participate in this study, please don't expect to receive any personal or professional benefits. All benefits will be for academic research and expanding the existing body of knowledge regarding learning styles assessments, employee engagement, and employee retention.

Will you receive compensation for participating? There is no compensation for participating in this study. Participation is voluntary.

Are there any costs? If you decide to participate, you will not have to pay anything. Participation will be done during your regularly scheduled shift.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Educational Foundations, Leadership, and Technology nor with InterCall, Inc. or West Corporation.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by keeping it secured with the researcher and removing all identifiers with the exception of educational attainment information. Information collected through your participation will be used to fulfill an educational requirement for the completion of a doctoral dissertation.

If you have questions about this study, *please ask them now or* contact Kate Nelson at kwn0001@auburn.edu, knelson@intercall.com, call her at 706.501.5792.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.

_____
Investigator's signature   Date

_____
Print Name

_____
Co-Investigator   Date

_____
Printed Name

APPENDIX D

INFORMATION LETTER – ORGANIZATION COMMITMENT QUESTIONNAIRE

INFORMATION LETTER

For a Research Study entitled

"An Investigation of the Administration of Learning Styles Assessments and Educational Attainment among Hourly Employees and the Effects on Employee Engagement and Retention"

You are invited to participate in a research study to provide information about your current level of employee engagement. This study will also include information about your level of education and whether that variable affects employee engagement and retention. The study is being conducted by Kate Nelson in the Auburn University Department of Educational Foundations, Leadership, and Technology. She also works in the Training Department at InterCall as the Speech and Training Analyst for the company. Her research is being conducted under the direction of Dr. James Witte in the Auburn University Department of Educational Foundations, Leadership, and Technology. You are invited to participate because you have been employed with InterCall for no more than one year, are an hourly paid employee, and are age 19 or older.

What will be involved if you participate? If you decide to participate in this research study, you will be asked to complete a demographic questionnaire regarding your educational attainment (paper and pen), and a questionnaire regarding your level of employee engagement. Your total time commitment will be approximately 30 minutes.

Are there any risks or discomforts? The risks associated with participating in this study are: None.

Are there any benefits to yourself or others? If you participate in this study, please don't expect to receive any personal or professional benefits. All benefits will be for academic research and expanding the existing body of knowledge regarding learning styles assessments, employee engagement, and employee retention.

Will you receive compensation for participating? There is no compensation for participating in this study. Participation is voluntary.

Are there any costs? If you decide to participate, you will not have to pay anything. Participation will be done during your regularly scheduled shift.

If you change your mind about participating, you can withdraw at any time during the study. Your participation is completely voluntary. If you choose to withdraw, your data can be withdrawn as long as it is identifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University, the Department of Educational Foundations, Leadership, and Technology nor with InterCall, Inc. or West Corporation.

Any data obtained in connection with this study will remain anonymous. We will protect your privacy and the data you provide by keeping it secured with the researcher and removing all identifiers with the exception of educational attainment information. Information collected through your participation will be used to fulfill an educational requirement for the completion of a doctoral dissertation.

If you have questions about this study, *please ask them now or* contact Kate Nelson at kwn0001@auburn.edu, knelson@intercall.com, call her at 706.501.5792.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Research Compliance or the Institutional Review Board by phone (334)-844-5966 or e-mail at IRBadmin@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, THE DATA YOU PROVIDE WILL SERVE AS YOUR AGREEMENT TO DO SO. THIS LETTER IS YOURS TO KEEP.

_____
Investigator's signature   Date

_____
Print Name

_____
Co-Investigator   Date

_____
Printed Name

APPENDIX E

LEARNING STYLES AND STRATEGIES

LEARNING STYLES AND STRATEGIES
Richard M. Felder
Hoechst Celanese Professor of Chemical Engineering
North Carolina State University

Barbara A. Soloman
Coordinator of Advising, First Year College
North Carolina State University

ACTIVE AND REFLECTIVE LEARNERS

- Active learners tend to retain and understand information best by doing something active with it--discussing or applying it or explaining it to others. Reflective learners prefer to think about it quietly first.
- "Let's try it out and see how it works" is an active learner's phrase; "Let's think it through first" is the reflective learner's response.
- Active learners tend to like group work more than reflective learners, who prefer working alone.
- Sitting through lectures without getting to do anything physical but take notes is hard for both learning types, but particularly hard for active learners.

Everybody is active sometimes and reflective sometimes. Your preference for one category or the other may be strong, moderate, or mild. A balance of the two is desirable. If you always act before reflecting you can jump into things prematurely and get into trouble, while if you spend too much time reflecting you may never get anything done.

How can active learners help themselves?

If you are an active learner in a class that allows little or no class time for discussion or problem-solving activities, you should try to compensate for these lacks when you study. Study in a group in which the members take turns explaining different topics to each other. Work with others to guess what you will be asked on the next test and figure out how you will answer. You will always retain information better if you find ways to do something with it.

How can reflective learners help themselves?

If you are a reflective learner in a class that allows little or no class time for thinking about new information, you should try to compensate for this lack when you study. Don't simply read or memorize the material; stop periodically to review what you have read and to think of possible questions or applications. You might find it helpful to write short summaries of readings or class notes in your own words. Doing so may take extra time but will enable you to retain the material more effectively.

SENSING AND INTUITIVE LEARNERS

- Sensing learners tend to like learning facts, intuitive learners often prefer discovering possibilities and relationships.
- Sensors often like solving problems by well-established methods and dislike complications and surprises; intuitors like innovation and dislike repetition. Sensors are more likely than intuitors to resent being tested on material that has not been explicitly covered in class.
- Sensors tend to be patient with details and good at memorizing facts and doing hands-on (laboratory) work; intuitors may be better at grasping new concepts and are often more comfortable than sensors with abstractions and mathematical formulations.
- Sensors tend to be more practical and careful than intuitors; intuitors tend to work faster and to be more innovative than sensors.
- Sensors don't like courses that have no apparent connection to the real world; intuitors don't like "plug-and-chug" courses that involve a lot of memorization and routine calculations.

Everybody is sensing sometimes and intuitive sometimes. Your preference for one or the other may be strong, moderate, or mild. To be effective as a learner and problem solver, you need to be able to function both ways. If you overemphasize intuition, you may miss important details or make careless mistakes in calculations or hands-on work; if you overemphasize sensing, you may rely too much on memorization and familiar methods and not concentrate enough on understanding and innovative thinking.

How can sensing learners help themselves?

Sensors remember and understand information best if they can see how it connects to the real world. If you are in a class where most of the material is abstract and theoretical, you may have difficulty. Ask your instructor for specific examples of concepts and procedures, and find out how the concepts apply in practice. If the teacher does not provide enough specifics, try to find some in your course text or other references or by brainstorming with friends or classmates.

How can intuitive learners help themselves?

Many college lecture classes are aimed at intuitors. However, if you are an intuitor and you happen to be in a class that deals primarily with memorization and rote substitution in formulas, you may have trouble with boredom. Ask your instructor for interpretations or theories that link the facts, or try to find the connections yourself. You may also be prone to careless mistakes on test because you are impatient with details and don't like repetition (as in checking your completed solutions). Take time to read the entire question before you start answering and be sure to check your results

VISUAL AND VERBAL LEARNERS

Visual learners remember best what they see--pictures, diagrams, flow charts, time lines, films, and demonstrations. Verbal learners get more out of words--written and spoken explanations. Everyone learns more when information is presented both visually and verbally.

In most college classes very little visual information is presented: students mainly listen to lectures and read material written on chalkboards and in textbooks and handouts. Unfortunately, most people are visual learners, which means that most students do not get nearly as much as they would if more visual presentation were used in class. Good learners are capable of processing information presented either visually or verbally.

How can visual learners help themselves?

If you are a visual learner, try to find diagrams, sketches, schematics, photographs, flow charts, or any other visual representation of course material that is predominantly verbal. Ask your instructor, consult reference books, and see if any videotapes or CD-ROM displays of the course material are available. Prepare a concept map by listing key points, enclosing them in boxes or circles, and drawing lines with arrows between concepts to show connections. Color-code your notes with a highlighter so that everything relating to one topic is the same color.

How can verbal learners help themselves?

Write summaries or outlines of course material in your own words. Working in groups can be particularly effective: you gain understanding of material by hearing classmates' explanations and you learn even more when you do the explaining.

SEQUENTIAL AND GLOBAL LEARNERS

- Sequential learners tend to gain understanding in linear steps, with each step following logically from the previous one. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing connections, and then suddenly "getting it."

- Sequential learners tend to follow logical stepwise paths in finding solutions; global learners may be able to solve complex problems quickly or put things together in novel ways once they have grasped the big picture, but they may have difficulty explaining how they did it.

Many people who read this description may conclude incorrectly that they are global, since everyone has experienced bewilderment followed by a sudden flash of understanding. What makes you global or not is what happens before the light bulb goes on. Sequential learners may not fully understand the material but they can nevertheless do something with it (like solve the homework problems or pass the test) since the pieces they have absorbed are logically connected. Strongly global learners who lack good sequential thinking abilities, on the other hand, may have serious difficulties until they have the big picture. Even after they have it, they may be fuzzy about the details of the subject, while sequential learners may know a lot about specific aspects of a subject but may have trouble relating them to different aspects of the same subject or to different subjects.

How can sequential learners help themselves?

Most college courses are taught in a sequential manner. However, if you are a sequential learner and you have an instructor who jumps around from topic to topic or skips steps, you may have difficulty following and remembering. Ask the instructor to fill in the skipped steps, or fill them in yourself by consulting references. When you are studying, take the time to outline the lecture material for yourself in logical order. In the long run doing so will save you time. You might also try to strengthen your global thinking skills by relating each new topic you study to things you already know. The more you can do so, the deeper your understanding of the topic is likely to be.

How can global learners help themselves?

If you are a global learner, it can be helpful for you to realize that you need the big picture of a subject before you can master details. If your instructor plunges directly into new topics without bothering to explain how they relate to what you already know, it can cause problems for you. Fortunately, there are steps you can take that may help you get the big picture more rapidly. Before you begin to study the first section of a chapter in a text, skim through the entire chapter to get an overview. Doing so may be time-consuming initially but it may save you from going over and over individual parts later. Instead of spending a short time on every subject every night, you might find it more productive to immerse yourself in individual subjects for large blocks. Try to relate the subject to things you already know, either by asking the instructor to help you see connections or by consulting references. Above all, don't lose faith in yourself; you will eventually understand the new material, and once you do your understanding of how it connects to other topics and disciplines may enable you to apply it in ways that most sequential thinkers would never dream of.

APPENDIX F

ORGANIZATIONAL COMMITMENT QUESTIONNAIRE

Revised Version (Meyer, Allen, & Smith, 1993)

1 = strongly disagree
2 = disagree
3 = slightly disagree
4= undecided
5 = slightly agree
6 = agree
7 = strongly agree

Affective Commitment Scale
1. I would be very happy to spend the rest of my career with this organization.
2. I really feel as if this organization's problems are my own.
3. I do not feel a strong sense of "belonging" to my organization. (R)
4. I do not feel "emotionally attached" to this organization. (R)
5. I do not feel like "part of the family" at my organization. (R)
6. This organization has a great deal of personal meaning for me.

Continuance Commitment Scale
1. Right now, staying with my organization is a matter of necessity as much as desire.
2. It would be very hard for me to leave my organization right now, even if I wanted to.
3. Too much of my life would be disrupted if I decided I wanted to leave my organization now.
4. I feel that I have too few options to consider leaving this organization.
5. If I had not already put so much of myself into this organization, I might consider working elsewhere.
6. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.

Normative Commitment Scale
1. I do not feel any obligation to remain with my current employer. (R)
2. Even if it were to my advantage, I do not feel it would be right to leave my organization now.
3. I would feel guilty if I left my organization now.
4. This organization deserves my loyalty.
5. I would not leave my organization right now because I have a sense of obligation to the people in it.
6. I owe a great deal to my organization.

APPENDIX G

AUTHORIZATION LETTER

March 18th, 2015

Auburn University Institutional Review Board
c/o Office of Research Compliance
115 Ramsay Hall
Auburn, AL 36849

Please note that Mrs. Kate Nelson, AU Doctoral Candidate, has the permission of the InterCall to conduct research at our North American facilities for her study, "An Investigation of Learning Styles Assessments among Hourly Employees and the Effects on Employee Engagement and Retention."

Mrs. Nelson will contact employees in order to have them complete the Index of Learning Styles (a validated learning styles assessment) which will be completed online or on paper, a demographic questionnaire that will be completed online (in Qualtrics) or on paper and will not identify the employee by name, and the Organizational Commitment Questionnaire which will be completed in a training room (online or on paper) with results being collected by Mrs. Nelson and kept private. Her plan is to conduct research beginning March 30, 2015 – Nov. 30, 2015. For the purposes of this research, the only identifiable characteristics will be the highest level of educational attainment derived from the demographic questionnaire. There will be no extra compensation or incentives given to the employees upon completion of the instruments. Mrs. Nelson's on-site research activities will be finished by Nov. 30, 2015.

Employees will complete these items during their regular schedules with minimal impacts on business needs. Mrs. Nelson has also agreed to provide to my office a copy of the Auburn University IRB-approved, stamped consent document before she contacts participants, and will also provide a copy of any aggregate results.

If there are any questions, please contact my office.

Signed,

Michael R Carrne
Sr. Training Manager North America
mcarrne@intercall.com

APPENDIX H

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

Please answer the following:

What is your gender?

○ Female

○ Male

What is your highest level of education?

○ GED (Graduate Equivalency Diploma)

○ High school diploma

○ Attended some community college

○ Earned an Associates' degree

○ Attended a four-year institution but did not attain a degree

○ Earned a four year (Bachelor's) degree

○ Attended an online or distance program and earned a certification

○ Attended an online or distance program and earned a degree

APPENDIX I

INDEX OF LEARNING STYLES

Index of Learning Styles Questionnaire

Barbara A. Soloman
Richard M. Felder

North Carolina State University

For each of the 44 questions below select either "a" or "b" to indicate your answer. Please choose only one answer for each question. If both "a" and "b" seem to apply to you, choose the one that applies more frequently. When you are finished selecting answers to each question please select the submit button at the end of the form.

1. I understand something better after I

   ○ **(a)** try it out.

   ○ **(b)** think it through.

2. I would rather be considered

   ○ **(a)** realistic.

   ○ **(b)** innovative.

3. When I think about what I did yesterday, I am most likely to get

   ○ **(a)** a picture.

   ○ **(b)** words.

4. I tend to

   ○ **(a)** understand details of a subject but may be fuzzy about its overall structure.

   ○ **(b)** understand the overall structure but may be fuzzy about details.

5. When I am learning something new, it helps me to

○ (a) talk about it.

○ (b) think about it.

6. If I were a teacher, I would rather teach a course

○ (a) that deals with facts and real life situations.

○ (b) that deals with ideas and theories.

7. I prefer to get new information in

○ (a) pictures, diagrams, graphs, or maps.

○ (b) written directions or verbal information.

8. Once I understand

○ (a) all the parts, I understand the whole thing.

○ (b) the whole thing, I see how the parts fit.

9. In a study group working on difficult material, I am more likely to

○ (a) jump in and contribute ideas.

○ (b) sit back and listen.

10. I find it easier

○ (a) to learn facts.

○ (b) to learn concepts.

11. In a book with lots of pictures and charts, I am likely to

○ (a) look over the pictures and charts carefully.

○ (b) focus on the written text.

12. When I solve math problems

○ (a) I usually work my way to the solutions one step at a time.

○ (b) I often just see the solutions but then have to struggle to figure out the steps to get to them.

13. In classes I have taken

○ (a) I have usually gotten to know many of the students.

○ (b) I have rarely gotten to know many of the students.

14. In reading nonfiction, I prefer

○ (a) something that teaches me new facts or tells me how to do something.

119

 ○ **(b)** something that gives me new ideas to think about.

15. I like teachers

 ○ **(a)** who put a lot of diagrams on the board.

 ○ **(b)** who spend a lot of time explaining.

16. When I'm analyzing a story or a novel

 ○ **(a)** I think of the incidents and try to put them together to figure out the themes.

 ○ **(b)** I just know what the themes are when I finish reading and then I have to go back and find the incidents that demonstrate them.

17. When I start a homework problem, I am more likely to

 ○ **(a)** start working on the solution immediately.

 ○ **(b)** try to fully understand the problem first.

18. I prefer the idea of

 ○ **(a)** certainty.

 ○ **(b)** theory.

19. I remember best

 ○ **(a)** what I see.

 ○ **(b)** what I hear.

20. It is more important to me that an instructor

 ○ **(a)** lay out the material in clear sequential steps.

 ○ **(b)** give me an overall picture and relate the material to other subjects.

21. I prefer to study

 ○ **(a)** in a study group.

 ○ **(b)** alone.

22. I am more likely to be considered

 ○ **(a)** careful about the details of my work.

 ○ **(b)** creative about how to do my work.

23. When I get directions to a new place, I prefer

 ○ **(a)** a map.

 ○ **(b)** written instructions.

24. I learn

○   **(a)** at a fairly regular pace. If I study hard, I'll "get it."

○   **(b)** in fits and starts. I'll be totally confused and then suddenly it all "clicks."

25. I would rather first

○   **(a)** try things out.

○   **(b)** think about how I'm going to do it.

26. When I am reading for enjoyment, I like writers to

○   **(a)** clearly say what they mean.

○   **(b)** say things in creative, interesting ways.

27. When I see a diagram or sketch in class, I am most likely to remember

○   **(a)** the picture.

○   **(b)** what the instructor said about it.

28. When considering a body of information, I am more likely to

○   **(a)** focus on details and miss the big picture.

○   **(b)** try to understand the big picture before getting into the details.

29. I more easily remember

○   **(a)** something I have done.

○   **(b)** something I have thought a lot about.

30. When I have to perform a task, I prefer to

○   **(a)** master one way of doing it.

○   **(b)** come up with new ways of doing it.

31. When someone is showing me data, I prefer

○   **(a)** charts or graphs.

○   **(b)** text summarizing the results.

32. When writing a paper, I am more likely to

○   **(a)** work on (think about or write) the beginning of the paper and progress forward.

○   **(b)** work on (think about or write) different parts of the paper and then order them.

33. When I have to work on a group project, I first want to

○ **(a)** have "group brainstorming" where everyone contributes ideas.

○ **(b)** brainstorm individually and then come together as a group to compare ideas.

34. I consider it higher praise to call someone

○ **(a)** sensible.

○ **(b)** imaginative.

35. When I meet people at a party, I am more likely to remember

○ **(a)** what they looked like.

○ **(b)** what they said about themselves.

36. When I am learning a new subject, I prefer to

○ **(a)** stay focused on that subject, learning as much about it as I can.

○ **(b)** try to make connections between that subject and related subjects.

37. I am more likely to be considered

○ **(a)** outgoing.

○ **(b)** reserved.

38. I prefer courses that emphasize

○ **(a)** concrete material (facts, data).

○ **(b)** abstract material (concepts, theories).

39. For entertainment, I would rather

○ **(a)** watch television.

○ **(b)** read a book.

40. Some teachers start their lectures with an outline of what they will cover. Such outlines are

○ **(a)** somewhat helpful to me.

○ **(b)** very helpful to me.

41. The idea of doing homework in groups, with one grade for the entire group,

    ○ **(a)** appeals to me.

    ○ **(b)** does not appeal to me.

42. When I am doing long calculations,

    ○ **(a)** I tend to repeat all my steps and check my work carefully.

    ○ **(b)** I find checking my work tiresome and have to force myself to do it.

43. I tend to picture places I have been

    ○ **(a)** easily and fairly accurately.

    ○ **(b)** with difficulty and without much detail.

44. When solving problems in a group, I would be more likely to

    ○ **(a)** think of the steps in the solution process.

    ○ **(b)** think of possible consequences or applications of the solution in a wide range of areas.

When you have completed filling out the above form please click on the Submit button below. Your results will be returned to you. If you are not satisfied with your answers above please click on Reset to clear the form.

LEARNING THEORY MATRIX – HOW DOES LEARNING OCCUR?

HOW DOES LEARNING OCCUR?

Table of Definitive Questions for Learning Theories

Learning Theory Matrix						
Definitive Questions for Learning Theories	Behaviorist Theory	Cognitive Theory	Constructivist Theory	Social Learning Theory	Connectivism Learning Theory	Adult Learning
How Does Learning Occur?	Learning happens when a correct response is demonstrated following the presentation of a specific environmental stimulus. Take the math equation 2+2=? The learner replies with the answer of 4. The equation is the stimulus and the proper answer is the associated response. (Skinner, Tolman, Bandura, Thorndike and Pavlov). Emphasis is on observable and measurable behaviors (Ertmer & Newby).	Structured, computational. Learning is a change of knowledge state. Knowledge acquisition is described as a mental activity that entails internal coding and structuring by the learner. Learner is viewed as an active participant in the learning process. Emphasis is on the building blocks of knowledge (e.g. identifying prerequisite relationships of content). Emphasis on structuring, organizing and sequencing information to facilitate optimal processing. (Piaget, Bruner, Gagne', Lewin, Kohler, Koffka, Ausubel, Ertmer/Newby). Knowledge is constructed from modeling the behavior and self-efficacy and control. (Bandura, Rotter, Woodward, Miller, Wilson, Ladd).	Social, meaning created by each learner (personal). Learners build personal interpretation of the world based on experiences and interactions Knowledge is embedded in the context in which it is used (authentic tasks in meaningful realistic settings) Create novel and situation-specific understandings by "assembling" knowledge from diverse sources appropriate to the problem at hand (flexible use of knowledge). (Piaget, Vygotsky and Ertmer & Newby) Knowledge is constructed from the notion of scaffolding. (Vygotsky)	Individuals are more likely to adopt a modeled behavior if it results in outcomes they value. Observational learning is also known as imitation or modeling. Observation Learning: learn by observing others. Self-Efficacy: Belief that you are cable of learning/performing tasks. Self-regulation: Monitoring/evaluating progress toward self-selected goals. Reinforcement plays role in learning, not entirely responsible for it. Cognitive process plays role in learning, not entirely responsible for it. (Rotter, Woodward, Miller, Wilson, Ladd). Motivation, including external, vicarious and self-reinforcement. (Bandura, 1986). Interaction/observation in social contexts. Movement from the periphery to the Centre of a community of practice. (Bandura, Lave & Wenger, Salomon).	Distributed within a network, social, technologically enhanced, recognizing and interpreting patterns. Theory for the digital age. Learning is a process of connecting specialized nodes or information sources. Learning may reside in non-human appliances. For example, database, network or community. Knowing where to find information is more important than knowing information. Learning & knowledge rest in diversity of opinions. Learning happens in different ways. Courses, email, conversations, web 2.0, MWDs, MUVE, World to desktop, gaming, PDAs, iPod, podcasts, collaborative writing, voice thread, blogs, etc. (Dede, C. Siemens,2005)	Reflection on personal experience (Jarvis 1987) Learners first acquire new information, interpret it according to previous experiences, then evaluate and remember concepts using existing mental schemata. (Rumelhart & Norman 1978) Reflect-in-Action and Reflect-on-Action (Schon 1983). Learning takes place when the subject matter is relevant to the personal interests of the student. (Knowles, 1984). Learning which is threatening to the self are more easily assimilated when external threats are at a minimum. Learning proceeds faster when the threat to self is low. Self-initiated learning is the most lasting and pervasive. (Rogers, (1994) (Maslow, Knowles)

APPENDIX K

LEARNING THEORY MATRIX – WHAT IS THE ROLE OF MEMORY?

WHAT IS THE ROLE OF MEMORY?

Table of Definitive Questions for Learning Theories

Definitive Questions for Learning Theories	Behaviorist Theory	Cognitive Theory	Constructivist Theory	Social Learning Theory	Connectivism Learning Theory	Adult Learning
What is the role of memory?	Memory is hardwiring of repeated experiences – where reward and punishment are most influential. Forgetting is attributed to the "nonuse" of a response over time. The use of periodic practice or review serves to maintain a learner's readiness to response (Schunk, 1991) Gaining attention (reception), Informing learners of the objective (expectancy).	Encoding, storage, transform, rehearse and retrieval. Learning results when information is stored in memory in an organized, meaningful manner. Designers use techniques such as advance organizers, analogies, hierarchical relationships, and matrices to help learners relate new information to prior knowledge. Forgetting is the inability to retrieve information from memory because of interference, memory loss, or missing or inadequate cues needed to access information (Ertmer & Newby).	Prior knowledge remixed to current context. The goal of instruction is not to ensure that individuals know particular facts but rather those they elaborate on and interpret information. The emphasis is not on retrieving intact knowledge structures, but on providing learners with the means to create novel and situation-specific understandings by "assembling" prior knowledge from diverse sources appropriate to the problem at hand. For example, the knowledge of "design" activities has to be used by a practitioner in too many different ways for them all to be anticipated in advance.	Gain attention to overcome competing stimuli. Promote retention by using imagery and metaphors. Use exercises that reproduces behavior for try out and practice Provide reinforcement for motivation (Bandura, 1986).	Adaptive patterns, representative of current state, existing in networks. (Siemens & Downes 2005) "Understanding is developed through continued, situated use and does not crystallize into categorical definition" (Brown et al, 1989, pf33). The emphasis is not on retrieving intact knowledge structures, but on providing learners with the means to create novel and situation-specific understandings by "assembling" prior knowledge from diverse sources appropriate to the problem at hand. (Spiro, Feltovick, Jacobson, and Coulson, 1991).	Rehearsal –involves active processing – Chunking (Newell, A, 1990). Experience is a factor in one's ability to create, retain and transfer knowledge (Reagans 2003). Holds changing concept of self. (Moslow & Rogers)

LEARNING THEORY MATRIX – HOW DOES TRANSFER OCCUR?

HOW DOES TRANSFER OCCUR?

Table of Definitive Questions for Learning Theories

Definitive Questions for Learning Theories	Behaviorist Theory	Cognitive Theory	Constructivist Theory	Social Learning Theory	Connectivism Learning Theory	Adult Learning
How does transfer occur?	Stimuli and Responses (Thorndike, Pavlov, Watson, Guthrie, Hull, Tolman, Skinner). According to Tolman, a new stimulus (the sign) becomes associated with already meaningful stimuli (the significate) through a series of pairings. Result of generalization. Situations involving identical or similar features allow behaviors to transfer. (Ertmer & Newby)	Transfer of learning occurs due to previous encountered situations. (Thorndike 1928). Communicate or transfer knowledge in the most efficient, effective manner (mind-independent, can be mapped onto learners) Focus of instruction is to create learning or change by encouraging the learner to use appropriate learning strategies Learning results when information is stored in memory in an organized, meaningful way. Teachers/designers are responsible for assisting learners in organizing information in an optimal way so that it can be readily assimilated. (Koffka, Kohler, Lewin, Piaget, Ausubel, Bruner, Gagne)	Socialization (Piaget, Vygotsky). Build personal interpretations of the world based on individual experiences and interactions (constantly open to change cannot achieve a predetermined, "correct" meaning, knowledge emerges in relevant contexts). Learning is an active process of constructing rather than acquiring knowledge. Instruction is a process of supporting knowledge construction rather than communicating knowledge. Do not structure learning for the task, but engage learner in the actual use of the tools in real world situations. (Lave & Wenger, Piaget, Bransford, & Hasselbring, Grabinger and Spiro).	Facilitation, openness (Maslow and Rogers) Behavior reproduction supported by self-efficacy and regulation. (Bandura, 1986).	Connecting to adding nodes, growing the network. Social/conceptual and biological. (Siemens, Downes)	Critical reflection Reflection/think time. (Garvin 1993). Development – the ability to think critically. (Merriam and Caffarella 1999)

APPENDIX M

LEARNING THEORY MATRIX – WHAT TYPES OF LEARNING ARE BEST EXPLAINED

BY THIS THEORY?

WHAT TYPES OF LEARNING ARE BEST EXPLAINED BY THIS THEORY?

Table of Definitive Questions for Learning Theories

What types of learning are best explained by this theory?	Task-based learning. (Skinner, Bandura, Thorndike, Pavlov). Stimulus-response association (Winn 1990), which include instructional cues, practice and reinforcement Learning that involves discriminations (recalling facts), generalizations (defining and illustrating concepts, and associations (applying explanations), and chaining (automatically performing a specified procedure). (Schunk 1991).	Reasoning, clear objectives, problem solving (Schunk, 1991) Simplification and standardization (Bednar et al., 1991). Intelligence is a function of the number of connections learned. (Thorndike, 1927). Multiple Intelligences (Gardner 1983)	Social, vague ("ill-defined"). Jonnassen, 1991a, described three stages of knowledge acquisition: introductory, advanced, and expert. He argues that constructive learning environments are most effective for the stage of advanced knowledge acquisition, where initial misconceptions and biases acquired during the introductory stage can be discovered, negotiated, and if necessary, modified and/or removed. Jonnassee agrees that introductory knowledge acquisition is better supported by more objectivistic approaches (behavior and/or cognitive). Multiple Intelligences (Gardner 1983)	Classroom: k-12 and Adults Workplace: Adults Social: Child and Adult (Wilson, 1980). Multiple Intelligences (Gardner 1983)	Complex learning, rapid changing core, diverse knowledge sources (Heylighen, (2008), Siemens and Downes 2005). Multiple Intelligences (Gardner 1983)	Self-directed and independent. (Moslow and Rogers). Andragogy and critical reflection. (Knowles, M. 1968). Explain why specific things are being taught (e.tg., certain commands, functions, operations, etc.) Instruction should be task-oriented instead of memorization Instruction should take into account the wide range of different backgrounds of learners. Since adults are self-directed, instruction should allow learners to discover things for themselves providing guidance and help when mistakes are made. (Knowles, 1984). Multiple Intelligences (Gardner 1983)

LEARNING THEORY MATRIX – HOW IS TECHNOLOGY USED FOR LEARNING IN

YOUR INDUSTRY?

HOW IS TECHNOLOGY USED FOR LEARNING IN YOUR INDUSTRY?

Table of Definitive Questions for Learning Theories

| How is technology used for learning in your industry? | Multiple Intelligences (Gardner 1983)

Information Processing Theories (g. Miller, 1956).chunking – the idea that short-term memory could only hold 5-9 chunks of information (seven plus or minus two) where a chunk is any meaningful unit. I.e., digits, words, chess positions, or people's faces.

TOTE (Test-Operate-test-Exit) (miller, Galanter & Pribram (1960)), | Schema (Bartlett, 1932), arrived at the concept from studies of memory he conducted in which subjects re-called details of stories that were not actually there. Suggested that memory takes the form of schema which pro-vide a mental frame-work for understanding and remembering infor-mation.

Bransford & Franks (1971) involved in showing people pictures and asking questions them about what the story depicted; people would remember differ-ent details depending upon the nature of the picture. | Mathematical Learning theory (R. C. Atkinson 1972), Maximize mean performance of the whole class, Minimize the variance in performance for the whole class, Maximize the number of students who score at grade level, or maximize the mean performance for each individual. | | Intranet –internal online information.
LMS – Learning Man-agement System, web conferencing.

The Cloud-based Ap-plication for non-tra-ditional learning.

Geo-everything, Per-sonal Web, Semantic-Aware Application – to solve difficult prob-lems—bottom-up and to-down approaches.
(The Horizon Report-2009) | Criterion referenced In-struction (R. Mager, 1975). Goal/task analysis –to identify what needs to be learned, (2) perfor-mance objectives—exact specification of the out-comes to be accom-plished and how they are to be evaluated, (3) crite-rion references testing—evaluation of learning in terms of the knowledge/skills speci-fied in the objectives, (4) development of learning modules tied to specific objectives.

Self-paced course involv-ing a variety of different media (e.g., workbooks, videotapes, small group discussion, and comput-er-based instruction). |

Table of Definitive Questions for Learning Theories

	TOTE replaces the stimulus-orespons e as the basic unit of behavior. The goal is tested to see if it has been achieved and if not an operation is performed to achieve the goal; this cycle of test-operate is repeated until the goal is eventually achieved or abandoned. The basis of many subsequent theories of problem solving (e.g., GPS) and Production System.	Novice versus expert performance (e.g., Chi et al., 1988) suggests that the nature of ex-pertise is largely due to the possession of schema that guides per-ception and problem-solving.				Mastery learning and performance-oriented in-struction. Feedback/Reinforcement (Markle, S. R. (1964)).