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Walden University

College of Management and Technology

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Lawrence Roy Arnold

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2016

Abstract

Strategies for Reducing High Turnover Among Information Technology Professionals

by

Lawrence Arnold

MSM, Troy University, 2005

BS, University of Maryland University College, 2004

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

May 2016

Abstract

Organizations globally are spending millions of dollars replacing information technology (IT) professionals. IT professionals, who possess technical skills and competencies that interconnect business processes, are costly to replace. There are direct and indirect costs associated when an IT professional leaves, such as advertising fees, headhunting fees, and project delays. Lacking a firm understanding of the reasons why IT professionals leave their positions, many business leaders do not have strategies for reducing turnover rates. Building on Herzberg's motivation-hygiene theory and March and Simon's process model of turnover, this exploratory multiple case study sought to identify the strategies that business leaders view as essential for retaining IT professionals.

Semistructured interviews were conducted with 10 IT managers in the Houston, Texas, area; participants were selected using a purposive sampling technique. Thematic analysis revealed eight strategies for addressing turnover: compensation, opportunity and advancement, rewards and recognition, relationship with the supervisor and coworkers, training and development, communications, meaningful work, and flexible work schedule. Findings from this study may contribute to positive social change by providing business leaders with more insight about how they can retain IT professionals. The high turnover among IT professionals affects individuals, families, communities, organizations, and the economy. Implementing strategies to reduce turnover rates can help keep individual employees and their family members together and reduce the unemployment rates.

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Dedication

First, I dedicate this dissertation to my parents, Trevor and Murlyn Arnold. My parents have been my biggest supporters and my role models. Mom and Dad, I am forever indebted for the loving support and the sacrifices that you have made. To my brothers and sister, Wayne, Conrad, Sheldon, and Sophia, thank you for your unconditional love. Finally, to my daughter, Cearra, I love you unconditionally and want you to reach for the stars.

Second, I dedicate my dissertation to the citizens of Dela Vega City in Spanish Town, Jamaica. To the children attending Spanish Town Basic and Spanish Town Primary, I encourage you to dream big. My journey to achieve the highest level of education started there.

Finally, I dedicate my dissertation to my amazing high school, St Catherine High. To the hardworking teachers and staff who kept me on the right path, I want to thank you. Mr. Kenneth Neal, this dissertation is for you. To all students, present, past, and future, I say, "Prayer and Work Conquer All," go BLUE!

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Section 1: Foundation of the Study

The high turnover rate among information technology (IT) professionals is a problem for business leaders globally and is costing organizations millions of dollars (Arokiasamy, 2013; Elçi, Şener, Aksoy, & Alpkan, 2012). Some researchers (see Jyothi & Ravindran, 2012; Khera & Gulati, 2012) have studied the antecedents of turnover among IT professionals such as job satisfaction, organizational commitment, and the supervisor/coworker relationship. Yet, many business leaders are not aware of effective strategies for reducing turnover rates for their IT workers. This qualitative exploratory multiple case study contributes additional understanding about the problem of turnover in one IT industry locale. By exploring existing retention models and providing suggestions to business leaders on retention strategies for IT professionals, study findings may help reduce turnover rates.

Background of the Problem

The advancement in technology has created a high demand for IT professionals (Tong, Tak, & Wong, 2013; Zhang, Ryan, Prybutok, & Kappelman, 2012). Turnover rates among IT professionals have increased globally (Arshadi & Shahbazi, 2013). In this context, organizations find it increasingly difficult to retain IT professionals (Erturk & Vurgun, 2014; Woźniak & Łubieńska, 2013).

Turnover is costly to organizations (Arokiasamy, 2013; Arshadi & Shahbazi, 2013; Bajwa, Yousaf, & Rizwan, 2014; Dinger, Thatcher, Stepina, & Craig, 2012). Replacing one IT professional has been documented to cost anywhere from 50-100% of the replaced individual's annual salary (Vijayakumar, 2012). In addition, departing IT

professionals often take intellectual property, relationships, and investments with them (Al-Salemi, 2013; Vijayakumar, 2012). When IT professionals depart, established knowledge can become inaccessible and even permanently lost (Pee, Kankanhalli, Tan, & Tham, 2012). The aim of this qualitative exploratory multiple case study was to explore strategies that business leaders can use to retain IT professionals.

Problem Statement

According to the Bureau of Labor Statistics (2015), employment for IT professionals in the United States will grow 22% from 2012-2022; that rate is higher than all other occupations. The cost of losing an IT professional is between 50% and 100% of the employee's annual salary (Vijayakumar, 2012). Information technology professionals are in demand and can join competing companies for higher wages and better job opportunities (James & Mathew, 2012; Khera & Gulati, 2012). When an IT professional leaves an organization, the remaining employees' workloads, organizational workflow, and profits are affected (Arshadi & Shahbazi, 2013; Butali, Wesang'ula & Mamuli, 2013). The general business problem is that IT professionals are in demand and are switching between jobs, resulting in voids in the workplace. The specific business problem is that some business leaders lack the strategies needed to retain IT professionals.

Purpose Statement

The purpose of this qualitative exploratory multiple case study was to explore the strategies needed by business leaders to retain IT professionals. Senior IT managers constituted the target population. I conducted interviews with managers located in

Houston, Texas. This study contributes to social change by providing business leaders with a better understanding of employee retention strategies. This knowledge may result in reduced turnover rates among IT professionals.

Nature of the Study

For this study, I opted to use a qualitative research method because I wanted to study participants in their current environment and to gain an in-depth understanding of the phenomenon of turnover (Uluyol & Akçi, 2014). Quantitative research, which involves collecting statistical data and testing hypotheses, was not appropriate for this study (Lunde, Heggen, & Strand, 2013). I also considered a mixed method approach, which involves analyzing both qualitative and quantitative data (Terrell, 2012), but opted not to use it. As Morse and Cheek (2014) and Wisdom, Cavaleri, Onwuegbuzie, and Green (2012) found, a mixed-methods approach is not suitable for exploring retention strategies.

Ghormade and Dongre (2014), and Yin (2014) posited that the qualitative exploratory multiple case study design is used to observe, interview, and collect data from participants, and was appropriate for this study. A case study design is suitable when the researcher seeks to understand real-life events by asking open-ended questions (Guo, Porschitz, & Alves, 2013). The grounded theory design, which involves building theory for large groups by collecting and analyzing qualitative data, is not appropriate for exploring retention strategies (Bey, 2012; Moss, Gibson, & Dollarhide, 2014; Randall & Mello, 2012). In ethnographic research, an investigator studies a cultural group. Use of this method requires researchers to immerse themselves in the phenomenon of interest

(Cunliffe & Karunanayake, 2013; Simpson, Slutskaya, Hughes, & Simpson, 2014). The objective of this research was not to study a cultural group. A phenomenological design is ideal when exploring the human experiences and perceptions of the participants (Anosike, Ehrich, & Ahmed, 2012). Because I needed flexibility to explore, interview, observe, and analyze multiple companies and their employees, I did not view a phenomenological design to be suitable for this study. The narrative inquiry was not suitable for this study because narrative inquiry involves telling stories, autobiographies, art, and using field notes (Scutt & Hobson, 2013).

Research Question

The purpose of this qualitative exploratory multiple case study was to explore strategies for reducing high turnover rates among IT professionals. The overarching research question of this study was: what strategies do business leaders need to retain IT professionals in Houston, Texas?

Interview Questions

Participants answered the following questions:

1. What strategies do you use to reduce the turnover rate among IT professionals?
2. How effective are the retention strategies?
3. Why do you think IT professionals leave the organization?
4. How can you use your experiences and knowledge to retain IT professionals within the organization?

5. How do you think IT professionals perceive their contributions within the organization?
6. How do you reward or recognize an IT professional for remarkable contributions to the organization?
7. What development and training plans do you have for IT professionals?
8. What recommendations can you give how to reduce the turnover rate among IT professionals?

Conceptual Framework

The conceptual framework for this study consisted of Herzberg's (1959) motivation-hygiene theory, also known as the two-factor theory, and March and Simon's (1958) process model of turnover. Herzberg identified which factors account for employee satisfaction or dissatisfaction in the workplace. Herzberg listed two sets of factors tied to employee job satisfaction. The first set relates to motivation factors. Herzberg suggested that factors such as recognition, advancement, growth, and achievement are intrinsic to the job and provide a sense of fulfillment. The second set of factors includes the hygiene factors. In my case study, hygiene factors refers to the causes of IT professionals' dissatisfaction, such as inadequate pay and a negative supervisor relationship (Arshadi & Shahbazi, 2013).

March and Simon (1958) introduced the process model of turnover and posited that job satisfaction will reduce employee turnover. March and Simon emphasized the availability of jobs in the market, thereby creating a demand (Bisht & Singh, 2012; Gamage & Buddhika, 2013). The findings from previous studies on job satisfaction

corroborates with the March and Simon process model of turnover theory. Findings from previous studies indicated that IT professional leave their positions due to dissatisfaction (Aiswarya & Ramasundaram, 2012), greater availability of jobs (Gamage & Buddhika, 2013), and better opportunities with other companies (Davey, Fearon, & McLaughlin, 2013; Hancock, Allen, Bosco, McDaniel, & Pierce, 2013). Ease of movement contributes to turnover because IT professionals can change jobs readily and move without difficulty because of high demand and a short supply of available workers (Woźniak & Łubieńska, 2013). I believe that Herzberg's (1959) motivation-hygiene theory and March and Simon's (1958) process model of turnover were appropriate and relevant for exploring retention strategies in this study.

Operational Definitions

The following terms were used in this study:

Information technology professionals. Information technology professionals are the creative minds behind information technology systems; they develop the software for specific functions, program computers, protect information against threats, design information technology solutions, and design and build data communications networks, among other duties (Bureau of Labor Statistics, 2015; Thomas, 2015).

Job satisfaction. Job satisfaction is a state of mind characterized by positive emotions and how an individual feels about his or her job; those things that the job provides that are important to the individual (Jyothi & Ravindran, 2012).

Organizational commitment. Organizational commitment is the employee's degree of involvement and dedication to an organization (Jung & Kim, 2012).

Retention. Retention is keeping employees in the company (Butali et al., 2013).

Turnover. Turnover is the rate at which an employer gain and losses employees (Anvari, JianFu, & Chermahini, 2014; Butali et al., 2013). I will further discuss turnover as a construct in the literature review.

Turnover intention. Turnover intention is the psychological tendency that an employee has to leave the current job (Erturk & Vurgun (2014), or the employee's decision to quit the present job (Ashar, Ghafoor, Munir, & Hafeez, 2013).

Work-family conflict. Work-family conflict is the pressures of the work and family that become incompatible such that compliance with one would make it more difficult or render impossible compliance with the other (Aiswarya & Ramasundaram, 2012).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are the facts in a study that may not be verified (Roy & Pacuit, 2013). The first assumption I made was that the participants would answer questions truthfully during their interviews. Qualitative researchers using interview methods explore the underlying reasons for issues by asking open-ended questions during interviews (Yin, 2014). The second assumption I made was that the participants would share real-life events about the research topic during the interviews.

Limitations

Limitations are the gaps or weakness in a study (Yu, Benlian, & Hess, 2012). There were two limitations in this study. The first limitation was that the research was

specific to IT professionals in Houston. The results may have been different if the study were to expand to a larger geographical area. The second limitation was that the sample size was limited to 10 IT professionals. A larger sample size might have yielded a different result (Robinson, 2014; Royset, 2013).

Delimitations

Delimitations are the boundaries established in a study (Ody-Brasier & Vermeulen, 2014). This study had three delimitations. The first delimitation was the location of the study, Houston, Texas. My aim was to narrow the scope of this study to one major city vice multiple cities. The second delimitation was that I studied only two companies in this multiple case study research. The third delimitation related to my sample size. I interviewed 10 IT managers. .

Significance of the Study

Contribution to Business Practice

This qualitative exploratory multiple case study may contribute to business practice by exploring strategies for reducing turnover rates among IT professionals. A critical issue for business leaders is retaining IT professionals, given the direct and indirect cost associated when an IT professional leaves, such as advertising fees, headhunting fees, project delays, recruiting, and training (Vijayakumar, 2012). This study is designed to help business leaders develop strategies that may reduce the direct and indirect cost associated with turnover (Arshadi & Shahbazi, 2013; Chang, Jiang, Klein, & Chen, 2012), along with strategies to improve IT retention rates.

Implications for Social Change

This study may contribute to social changes by adding knowledge about the overall study of turnover, which could also help reduce turnover rates in different industries. The results of the study may help business leaders develop strategies to reduce turnover rates among IT professionals. Business leaders may gain a better understanding of ways to improve employee satisfaction.

A Review of the Professional and Academic Literature

Some researchers have studied the antecedents of turnover, such as job satisfaction, organizational commitment, pay, promotion, stress, burnout, and job embeddedness (see Burns & Christie, 2013; Johnson & Spinks, 2013). The bulk of the research on turnover (see AlBattat & Som, 2013; Al-Salemi, 2013; Anvari et al., 2014) are quantitative studies, in which researchers examined the causes and effects, or various individual-level predictors of, turnover (see Hancock et al., 2013). Although there are studies conducted on the turnover of IT professionals, my review of the literature indicates that few researchers have conducted qualitative studies on strategies to reduce turnover rates. Asaduzzama, Hossain, and Rahman (2014) is one qualitative study on this topic.

Despite the extensive research on turnover and information obtained from exit interviews, researchers still have limited knowledge about the underlying reasons why IT professionals leave their jobs (Joarder & Ashraf, 2012). In conducting this study, I responded to Agrusa and Lema's (2012) and Thomas' (2015) call for additional research

on retention strategies. In doing so, I hoped to expand the existing knowledge on turnover.

In this section, I discuss my literature search strategy. I then provide a more in-depth overview of my conceptual framework. This discussion is followed by an extensive review of the literature.

I searched Walden University Library databases as well as Google Scholar, ScienceDirect, ProQuest, Emerald Management Journals, Business Source Complete, ABI/INFORM, SAGE, and EBSCO Primary were some of the databases that I searched. I used the following keywords: *retention*, *turnover*, and *IT professionals*. The content of the literature review consists of 178 journals, two government reports, five books, and two dissertations. Of the 187 sources that I incorporated in this review, 184 (98%) were published between 2012-2016. Of the sources, 178 (95%) were peer-reviewed.

Conceptual Foundation

Herzberg's (1959) motivation-hygiene theory, also known as the two-factor theory, and the process model of turnover by March and Simon (1958) constituted the conceptual foundation of this study. Herzberg argued that job satisfaction and dissatisfaction were separate when measured on the same continuum. Herzberg suggested that the motivation factors such achievement, rewards and recognition, responsibility, meaningful work, and advancement are intrinsic to the job and reduce turnover. Conversely, Herzberg also asserted that hygiene factors such as insufficient pay and poor working conditions alleviated dissatisfaction and result in turnover.

March and Simon (1958) explored employees' perceived job alternatives and the ease of movement from one job to another. The authors asserted that employees were more likely to quit their current jobs if they had alternative jobs available to them. Information technology professionals possess technical skills and receive multiple job offers from competing companies (Anvari et al., 2014). There are many employment opportunities available for IT professionals because of the high demand for information technology employees (Bisht & Singh, 2012). Findings from this study indicate that ease of movement contribute to turnover because IT professionals can change jobs readily and move without difficulty (Woźniak & Łubieńska, 2013).

Demands for Information Technology Workers

Information technology is one of the most rewarding fields in the world (Haar & White, 2013). Information technology has revolutionized the landscape of some industries, including education, banking and finance, insurance, telecommunication, architecture, textiles, government institutes, and construction (Gamage & Buddhika, 2013). The use of information technology to accomplish work affects nearly every worker (Asaduzzama et al., 2014; Ashar et al., 2013). Some companies use information technology to gain competitive advantages and to enhance their organizational performance (Haar & White, 2013; Limbu, Jayachandran, & Babin, 2014). The rapid growth of information technology has created more employment opportunities for IT professionals across the globe (Bisht & Singh, 2012; Gamage & Buddhika, 2013).

The high demand for IT professionals and the abundance of jobs in the software industry have contributed to the increase in turnover rates (Bisht & Singh, 2012). In

addition, society has transitioned to a knowledge-based economy, thus creating a demand for information technology services, which results in more job opportunities for IT professionals (Arshadi & Shahbazi, 2013). Furthermore, business leaders are spending significant amounts of money developing and implementing information technology applications that require specialized IT skills (Ertuk & Vergun, 2014).

A Definition of Turnover

Turnover is the rate at which an employer gains and loses employees (Anvari et al., 2014). Strojilova and Rafferty (2013) described turnover as the rotation of employees around the labor market; between firms, jobs, and occupations; and between the states of employment and unemployment. Turnover is a major cause of declining productivity in some organizations (Huffman, Casper, & Payne, 2014).

Voluntary turnover is when a competent and capable employee makes the decision to leave and work elsewhere (Elçi et al., 2012; Nwokocha & Iheriohanma, 2012). Voluntary turnover occurs when an employee believes that his or her contributions to an organization surpass the inducements received in exchange (Joseph et al., 2014). In contrast, involuntary turnover is the employer's decision that the employee leaves the organization (Nwokocha & Iheriohanma, 2012). Other factors such as death, illness, and retirement may also lead to involuntary turnover (Pietersen & Oni, 2014).

Turnover rates may be misleading because of the many factors that may affect the actual numbers. Joarder and Ashraf (2012) asserted that the turnover rate represents the actual choice of an employee to leave if he or she believes that better alternatives are available. Maternity leaves and career breaks affect the calculation of turnover rates

because the separation may be temporary and the employees are likely to return (Burns & Christie, 2013). Although the evidence supports the adverse effects of turnover rates, company benefits linked to turnover include decreased compensation rates for new hires compared to veteran employees, including vacation days and health insurance (Hancock, 2013).

Global Research on Turnover

This section of the literature review is a review of international scholarship from various countries to provide a deeper understanding and a global perspective to the problem of turnover by studying different sources of literature from a diverse group of scholars. Some international researchers have made valuable contributions to the study of turnover. Bajwa et al. (2014) studied turnover in the service sector of Pakistan and posited that workplace environment influenced turnover intentions. Burns and Christie (2013) studied turnover among child protection and welfare workers in Ireland and posited that an adverse work environment influenced turnover intention. Al-Salemi (2013) examined the impact of organizational justice on employee turnover in Yemen and found that turnover intentions declined when the employees' perception of the organizational justice increased. Haar and White (2013) studied corporate entrepreneurship and IT towards employee retention in New Zealand and found that an entrepreneurial culture increased employee retention. Ladelsky and Catană (2013) reviewed the causes affecting turnover of IT employees in Israel and reported that job satisfaction related negatively to turnover intention. Chat-Uthai (2013) examined the automobile industry in Thailand and suggested that money was not the only precursor to

employee turnover. Nguyen (2014) studied the factors affecting turnover intention among IT professionals in Vietnam. Turnover is a global problem and is costly to organizations (Agrusa & Lema, 2012; Cho & Son, 2012; Pietersen & Oni, 2014).

The Phenomenon of Turnover Intention

The abundant empirical studies within this review of literature indicate that turnover intention is the precursor for actual turnover among employees (see Hoonakker, Carayon, & Korunka, 2013; Lai, Chan, & Lam, 2013; Memon, Salleh, Baharom, & Harun, 2014). Turnover intention is a psychological tendency that compels an employee to quit his or her current job (Ashar et al., 2013; Ertürk & Vurgun, 2014). This intention is a crucial stage before the actual turnover occurs (Al Battat & Som, 2013; Rainayee, 2013). A professional plateau becomes reality when a job proves unsatisfactory and less challenging, which reciprocates into employee turnover intention (Maier, Laumer, Eckhardt, & Weitzel, 2013).

Bajwa et al. (2014) opined that other factors such as job satisfaction and better opportunities might lead to employee turnover intentions. Pee et al.'s (2012) finding that about 40% of IT professionals indicated turnover intentions if new job opportunities came available supports that of Bajwa et al. Bajwa et al. examined the relationship between job satisfaction and turnover intention and concluded that job satisfaction contributed more than 32% to turnover intention. Other factors contributing to turnover intentions are human resources (HR) problems, organizational culture, organizational commitment, stress, leadership, and supervisor relationship (Elçi et al., 2012; Ladelsky & Catană, 2013; Mohr, Young, & Burgess Jr, 2012).

Leadership and Turnover Intentions

The lack of leadership contributes to voluntary turnover of IT employees (Thirulogasundaram & Kumar, 2012). Ng'ethe, Namusonge, and Iravo (2012) examined the influence of leadership style on the academic staff retention in the public schools in Kenya and found that there was a correlation between negative leadership style and turnover intention. In a similar study, Elçi et al. (2012) studied the impact of ethical leadership and leadership effectiveness on turnover intentions in three cities in Turkey—Istanbul, Kocaeli, and Bolu. Elçi et al. found that leadership effectiveness negatively influenced turnover intentions. Poor leadership has caused employees to lose enthusiasm and frustration that then contributed to voluntary turnover (Ladelsky & Catană, 2013; Tse, Huang, & Lam, 2013). Also, Bisht and Singh (2012) found that the lack of leadership caused IT employees to experience added stress, poor performance, and low job satisfaction, which influenced their turnover intentions.

A Global Perspective on the Turnover of IT Professionals

The demand for information technology has increased globally and is expected to stay strong for several years (Gamage & Buddhika, 2013). The inability to retain qualified IT professionals may cause organizations to lose their competitive advantage (Erturk & Vaughan, 2014). Some businesses rely on the expertise, knowledge, and skills of IT professionals (Nwokocha & Iheriohanma, 2012). Some of the factors that have contributed to IT professionals leaving an organization are different from the factors that have attributed to IT professionals staying with an organization (Pietersen & Oni, 2014).

Hoonakker, Carayon, and Korunka (2013) suggested that IT professionals have a higher tendency than other professionals to leave one company for another.

Researchers have conducted similar studies on the turnover rate among employees in other professions, for example, accounting (Nouri & Parker, 2013), journalists (Jung & Kim, 2012), casinos (Agrusa & Lema, 2012), governmental workers (Kim, 2012; Pietersen & Oni, 2014), and banking (Chitra & Badrinath, 2014; Khan, 2014; Shukla & Sinha, 2013). These studies demonstrate that turnover is a global problem for business leaders and one that encompasses multiple job sectors.

Turnover in the IT industry is reaching a crisis. It is reaching epidemic levels in other countries (Alias, Noor, & Hassan, 2014; Gurazada & Rao, 2013; Mohlala, Goldman, & Goosen, 2012). Al Battat and Som (2013) suggested that an IT professional may stay with an organization if the work is stimulating, there are chances for advancement, and the pay is equitable.

United States. The increase in globalization and business transformation is driving the demand for IT professionals (Hawk et al., 2012). The employment for IT professionals is projected to grow 24% compared to 10% of all other occupations in the United States. However, representative of the Bureau of Labor and Statistics predicted that turnover of IT professionals in the United States increased from 15% in 2009 to 32% in 2012.

India. India has the second largest working population and has emerged as the information technology hub of the world (Kanwar, Singh, & Kodwani, 2012; Łubieńska & Woźniak, 2012). Bangalore, Chennai, Hyderabad, Pune, and Kokatta are the top five

IT hubs in India (Pandu & Hussain, 2013). Information technology has become the largest growth engine in India, accounting for approximately 5.6% of India's gross domestic product (Jyothi & Ravindran, 2012; Kanwar et al., 2012). Also, the quality and cost-effective information technology services available have made India a suitable place for some organizations to outsource IT requirements (Bisht & Singh, 2012; Jyothi & Ravindran, 2012; Vijayakumar, 2012).

Despite the employment opportunities available within the IT industry in India, there are also adverse effects (Maheswari & Krishnan, 2014). The turnover rates among IT professionals in India have increased (Chitra & Badrinath, 2014) and are higher than in other professions (Gurazada & Rao, 2013), leading to project delays that affect profits for companies which outsource information technology functions in India. Some companies have added a retention clause on contracts for outsourcing companies to reduce turnover rates (Gurazada & Rao, 2013).

Korea. Cho and Son (2012) conducted a quantitative study on job embeddedness and turnover intentions among IT constructions workers in Korea. Cho and Son found that employees who sacrificed more, experienced greater job satisfaction and less turnover intentions. Similarly, Jeon, Lee, and Lee (2013) conducted a quantitative study on the effects of job satisfaction, organizational commitment, and turnover intentions in Korea. Jeon et al. found that factors such as recognition, autonomy, work-life balance, and work environment had significant effects on job satisfaction among software developers. In contrast, Jung and Kim (2012) examined the causes of employee burnout, organizational commitment, and turnover intention in a newspaper firm in Korea. The

results were similar to findings of Cho and Son and Jeon et al. Jung and Kim posited that overload, nonautonomous, nonsupportive work environment, pay, supervisor relationship, coworker relationship, promotion, and opportunities contributed to turnover intentions among newspaper employees in Korea.

Pakistan. Although the review of the literature indicates limited studies conducted on turnover of IT professionals in Pakistan, some researchers have studied turnover from various industries within Pakistan. There are turnover parallels among other sectors found to be consistent with IT professionals. Sajjad, Ghazanfar, and Ramzan (2013) conducted a quantitative study on the impact of motivation on employee turnover in the telecom sector of Pakistan and proposed that motivation factors decreased turnover intentions. Sajjad et al. further suggested that an increase in motivation would reduce employee turnover within the banking sector. Similarly, Ashar et al. (2013) conducted a quantitative study on training, employee commitment, and turnover intentions from a telecom and banking sector in Pakistan. Ashar et al. found a positive link between the perceived availability of training, supervisor support, and affective commitment.

Taiwan. Huang and Hsueh (2014) examined the relationship of a reward system for job performance and job satisfaction on the IT staff in the tourist hotels in Taiwan. Huang and Hsueh found that the reward system had an indirect relationship between job performance and job satisfaction. The authors found that the motivation for each IT profession was different. Huang and Hsueh suggested that managers develop different reward systems to achieve high job performance.

Chang et al. (2012) explored the career anchors and disturbances influencing turnover decisions of IT professionals in Taiwan and postulated that IT professionals are different from other employees because of their backgrounds and motivation. Chang et al. suggested that IT professionals exhibited different attitudes about their work at various stages of their careers. For example, IT professionals value creativity, technical competence, challenge, and lifestyle (Chang et al., 2012). Chang et al. posited that career development and training were important to Taiwanese IT professionals' desire to remain technologically current and to main employability.

Turkey. More than 70% of CEOs of IT-related companies in Turkey expressed that retaining IT professionals was the most important factor to success (Erturk & Vurgun, 2014). Although limited research has been conducted specifically on turnover of IT employees in Turkey, other researchers have made significant contributions by researching turnover in other industries in Turkey, such as pharmaceutical, health, and banking. Elçi et al. (2012) studied the impact of ethical leadership and leadership effectiveness on turnover intentions in Istanbul, Kocaeli, and Bolu, in Turkey. Elçi et al. found that negative leadership causes turnover intentions. Other researchers have conducted similar studies in Turkey (e.g., Tuzun & Kalemci, 2012) on turnover intentions and have suggested that organizational support and supervisor support reduced turnover intentions.

Brazil. Brazil forecasted that nearly 70,000 additional IT professionals were required in 2014; however, IT employees in Brazil were exploring different professions. Ramos and Joia (2013) explored the IT turn-away phenomenon in Brazil to investigate

why IT professionals moved to other professions. Ramos and Joia found that technical career growth was limited in Brazil and that IT professionals had fewer growth opportunities and turned to other areas for management positions.

Malaysia. Although there are limited studies on IT professionals in Malaysia, other studies support the notion that turnover has adverse effects in the country (Hong, Hao, Kumar, Ramedran, & Kadiresan, 2012). Several researchers have conducted studies on turnover in the hospitality industry (e.g., AlBattat & Som, 2013; Tews, Michel, & Ellingson, 2013; Yang, Wan, & Fu, 2012). The hospitality and tourism industry is a key economic driver in Malaysia, one of the most visited destinations for tourism; therefore, Malaysia allocates a significant number of resources to the tourism industry (Chan & Dar, 2014). However, the turnover rate in the hospitality industry is among the highest at 50% (Tews et al., 2013). AlBattat and Som (2013) found that poor working conditions, low salaries, and injustice contributed to turnover. Chan and Dar added that career attitudes also influenced turnover intentions in the Malaysian hospitality industry. The traditional notion that employees feel obligated to organizations no longer exists; therefore, employees might leave for better opportunities (Chan & Dar, 2014; Davey et al., 2013).

Sri Lanka. Information technology is lucrative in Sri Lanka; however, there is a high turnover rate among IT professionals (Gamage & Buddhika, 2012). Some companies are outsourcing IT functions to Sri Lanka because of the cheaper IT labor available. Gamage and Buddhika (2012) found that among IT professionals in Sri Lanka there was a negative relationship between job satisfaction and intention to leave. Gamage

and Buddhika suggested that managers identify the precursors to job satisfaction and develop strategies to mitigate them such as competitive market salaries and employee involvement.

Cost of Turnover

Numerous researchers have postulated that turnover is costly to an organization (Agrusa & Lema, 2012; Anvari et al., 2014; Nwokocha & Iheriohanma, 2012).

Information technology professionals possess special technical skills, making turnover expensive. Direct and indirect cost associated with turnover include advertising fees, headhunting fees, project delays, recruiting, and training cost, referral bonus, sign-on bonus, and background screening (Fidalgo & Gouveia, 2012; Gurazada & Rao, 2013; Nwokocha & Iheriohanma, 2012).

Some researchers have affirmed different costs associated with turnover of IT professionals. Ryan and Harden (2014) reported the cost of replacing an IT professional could be three to six times as much compared to other occupations. Vijayakumar (2012) and Frey, Bayón, and Totzek (2013) suggested replacing employees might cost up to twice the employee's annual salary based on positions held within the organization. Gurazada and Rao (2013) opined that employee turnover ranged between 25 to 250% of an employee's annual salary.

Additional indirect costs associated with losing IT professionals include unrealized technological advances, project delays, and lagged responses to changing market conditions, further exasperating and blurring the elements of actual expenses (Hong et al., 2012; Patel & Conklin, 2012). Furthermore, the cost to replace a skilled

worker such as an IT professional is high and time-consuming for employers (Dinger et al., 2012). Some companies add retention clauses in contracts to hold the outsourcing organization accountable for the additional cost associated with turnover of IT professionals (Gurazada & Rao, 2013). Additional costs of turnover are sometimes not readily quantifiable. For example, losing customers, relationships, productivity, and knowledge is difficult to quantify (Dinger et al., 2012).

Effects of Turnover Among IT Professionals in Organizations

When departing IT professionals leave an organization they take with them intellectual properties such as proprietary software, relationships, investments, and knowledge gained and then work for a competitor (Al-Salemi, 2013; Hong et al., 2012; Vijayakumar, 2012). Thus, established knowledge may become inaccessible or permanently lost when the IT professionals depart (Fidalgo & Gouveia, 2012; Pee et al., 2012). Furthermore, the remaining employees' workloads, organizational critical workflows, and profits are affected (Arshadi & Shahbazi, 2013; Butali et al., 2013; Tews et al., 2013).

Dinger et al. (2012) studied alternate job utility estimates as a predictor of turnover intention among IT professionals and found that departing employees who are well connected leave a gap that becomes costly for the organization. Furthermore, when key employees leave an organization, other employees sometimes follow (Vijayakumar, 2012). Similarly, Butali et al. (2013) examined the effects of staff turnover of 152 participants from the Masinde Muliro University of Science and Technology and found that productivity drops when new employees replace experience employees. The

remaining staff members share or transfer the workload from the departing employee, which becomes a burden on the remaining staff. The additional workload may lead to errors, overwork, and stress for the remaining employees (Malik et al., 2013). In addition, there is a lag time before new employees can perform at the same level as departing employees (Van der Aa, Bloemer, & Henseler, 2012).

Training new employees requires an investment in time and money to get that new employee to perform at a desired level (Vijayakumar, 2012). Furthermore, trainers' productivity decreases and additional costs are incurred for advertisements and headhunter fees (Butlaid et al., 2013). Researchers (e.g., Butali et al., 2013) have argued that turnover decreases productivity because it reduces efficiencies of critical workflow; turnover results in a loss of productivity (Karodia, Soni, & Cassim, 2014). The departure of a key employee, such as an IT professional, may affect an entire organization's critical process (Van der Aa, Bloemer, & Henseler, 2012).

Issues That Motivate an IT Professional

Motivation is an effective tool used to retain employees (Chitra & Badrinath, 2014). Chang et al. (2012) conducted a case study on the career anchors and disturbances influencing turnover decisions of IT professionals in Taiwan and found that IT employees valued anchors such as stability, creativity, technical competence, challenge, advancement, learning, geographic security, and entrepreneurship. Although some of the career anchors are similar to those of employees in other industries, Arunkumar and Parimala (2012) asserted that IT employees' motivational factors are different from other employees. Arunkumar and Parimala posited that training motivates some employees,

and that the lack of training could be the precursor for turnover. The literature supports the notion that the motivational factors for each employee is different; therefore, business leaders should better understand the motivational factors contributing to the job satisfaction of IT professionals (Arunkumar & Parimala, 2012).

Job Satisfaction

The review of the literature indicated that job satisfaction was the most studied precursor to turnover (Al-Salemi, 2013; Bajwa et al., 2014), the most frequently studied construct among the organizational behaviors' field of human resource management (Jung & Kim, 2012; Al-Salemi, 2013), and an important issue in the private and public sectors (Asaduzzama et al., 2014).

Defining job satisfaction. Among numerous definitions for the term *job satisfaction* are a worker's feelings toward the job (Ertuk et al., 2014; Thakur, 2014), the perception of what is important to the employee (Jyothi & Ravindran, 2012), and the attitude toward the overall feelings about the job itself (Nwokocha & Iheriohanma, 2012). Khera and Gulat (2012) defined job satisfaction as the employee's motivation to stay with an organization, and become part of the organizational family. Based on the different definitions of job satisfaction that are made by researchers, the concept of job satisfaction suggests that people feel an emotional sense of fulfillment about their job when intrinsic and extrinsic factors such as pay, recognition, promotion, working conditions, and relationship with their supervisor are met (Al-Salemi, 2013; Asaduzzama et al., 2014; Cho & Son, 2012).

Previous studies on job satisfaction. A comprehensive review of the literature indicated some researchers have conducted extensive studies on the various facets of job satisfaction and the link to turnover. For example, Aiswarya and Ramasundaram (2012) studied job satisfaction and the interference of work-life conflict of women in the IT sector. Asaduzzama et al. (2014) identified the motivating factors of job satisfaction of IT professionals in Bangladesh. Karodia et al. (2014) examined organizational development as a tool to improve employee job satisfaction. Gamage and Buddhika (2013), and Joarder and Ashraf (2012) studied job satisfaction and intention to leave. Gupta and Charu (2013) analyzed work/life balance and burnout as predictors of job satisfaction, while Huffman et al. (2014) examined the relationship between family support and job satisfaction. Jeon et al. (2013) researched the effects of software developers' job satisfaction. Jyothi and Ravindran (2012) studied employee job satisfaction of software employees in Bangalore. Kabungaidze, Mahlatshana, and Ngirande (2013) examined the impact of job satisfaction and some demographic variables on turnover. LeRouge, Wiley, and Maertz (2013) compared job satisfaction among IT and non-IT women. Meera and Thampi (2014) studied the effects of job related factors as motivators on job satisfaction. Menon and Thingujam (2012) studied recession and job satisfaction of Indian IT professionals. Rizwan et al. (2013) studied the antecedents of employee satisfaction and its impact on turnover. Steinberga and Smite (2013) explored job satisfaction of software professionals in an offshore office. Thakur (2014) examined the effects of job satisfaction in the IT sector. Tong et al. (2013) examined the relationship between organizational and job satisfaction in Hong Kong.

Different facets of job satisfaction. Some qualitative and quantitative researchers have studied the different facets of job satisfaction affecting turnover (Ongori & Agolla, 2012). Asaduzzama et al. (2014) asserted that pay, promotion, supervisor and employee relationships, and organizational commitment affected the job satisfaction of employees. Al-Salemi's (2013) findings were similar to the Asaduzzama et al. claim, but Al-Salemi added that organizational justice was also an important facet to reduce turnover. Similarly, Bajwa et al. (2012) added that working conditions, support, organizational commitment, and pressure were instrumental to job satisfaction. Bajwa et al. posited that an increase in job satisfaction would decrease turnover intentions.

LeRouge et al. (2013) investigated the differences in job satisfaction among women in IT jobs and non-IT jobs and suggested that the two groups were similar. LeRouge et al. posited that job security, work itself, work/life balance, and advancement/opportunities were linked to job satisfaction. Nwokocha and Iheriohanma (2012) added that employees would stay longer with an organization if they are satisfied with their job; however, employees who are dissatisfied with their jobs are more likely to be tardy, have higher rates of absenteeism, and quit their jobs (Asaduzzama et al., 2014).

Job satisfaction and perceived organizational justice and fairness. Fairness plays an important role in an employee job satisfaction (Al-Salemi, 2013). The review of the literature indicated that employees experienced a greater level of job satisfaction when treated fairly (Slavich, Cappetta, & Giangreco, 2014). Shih, Jiang, Klein, and Wang (2013) examined the relationship between fairness of rewards and work exhaustion among IT professionals and found that fairness or rewards are key factors to job

satisfaction among IT professionals. Al-Salemi suggested that managers might improve employee job satisfaction by fair appraisals and wages.

Job satisfaction and pay. Pay is a linked precursor to turnover (Al-Salemi, 2013; Asaduzzama et al., 2014; Khan, 2013) and plays an instrumental role in rewarding and retaining employees (Arokiasamy, 2013). Herzberg (1959) suggested that hygiene factors cause employee dissatisfaction, which leads to turnover. Inadequate pay was the primary reason educators in Malaysia left for better paying jobs (Hong et al., 2012). Employees could become dissatisfied with their jobs if they believe their pay is unfair and can potentially have positive or negative consequences (Arokiasamy, 2013). Arokiasamy (2013) suggested that pay is an effective retention strategy used to retain talented employees. Organizations with effective pay strategies gain competitive advantages in attracting and retaining employees (Patil & Sharma, 2014).

O'Halloran (2012) examined performance pay and employee turnover and found a decrease in turnover rates when employees receive some form of performance related pay. Pay was also a common factor affecting job satisfaction among IT professionals (Bisht & Singh, 2012). Pay was the primary reason for employees leaving their jobs without consideration about any other reasons in India (Guha, 2014).

However, a low salary or pay rate was not the lone determinant of voluntary turnover but rather in combination with other factors (Anvari et al., 2014; Latha, 2013; Vijayakumar, 2012). Raman, Bharathi, Sesha, and Joseph (2013) added that some software companies in India were providing good salary packages; however, employees left for other jobs. With the exception being in some third-world and developing

countries, monetary compensation alone is not a precursor to voluntary turnover (Chat-Uthai, 2012; Rizwan et al., 2013).

Employees showed a higher level of organizational commitment when job satisfaction is linked to pay (O'Halloran, 2012). Pay is also associated with an individual's motivation, which influences the decision to stay with an organization (Anvari et al., 2014). Patil and Sharma (2014) supported the association of job satisfaction with pay, performance, and productivity, but added that when employees are satisfied with their pay they stay with the organization. Based on the studies on pay, O'Halloran (2012) suggested that managers should offer fair pay that encourages employees to stay.

Job satisfaction and supervisor relationships. The empirical studies within this review of literature support the premise that an adverse relationship between the employee and the supervisor leads to turnover (Grissom, 2012; Shukla & Sinha, 2013). The supervisor plays an important role in employee's job satisfaction, and can influence an employee's decision to stay or leave (Nasiripour, Kazemi, & Izadi, 2012). Turnover intention occurs when there are problems between an employee and a supervisor (Shahabuddin, Azam, & Chowdhury, 2013).

Pietersen and Oni (2014) posited that the quality of an employee and supervisor relationship is a key predictor of turnover. Supervisors should build morale, treat employees fairly and with respect, and provide support (Pietersen & Oni, 2014). Some employees get frustrated when supervisors micromanage, which causes stress and influences turnover intentions (Shukla & Sinha, 2013; Tuzun & Kalemci, 2012).

Nwokocha and Iheriohanma (2012) asserted that productivity increases when a supervisor supports an employee. Talented employees might have other opportunities available to a competitor; however, supervisor support could influence the employee staying (Gao, Newcombe, Tilse, Wilson, & Tuckett, 2014; Grissom, 2012).

Job satisfaction and coworker relationships. A positive employee coworker engagement is one of the indicators of job satisfaction (Chat-Uthai, 2013; Spell & Eby, 2014). A close relationship with coworkers develops a bond that influences employees to stay with an organization (Dinger et al., 2012). Tews et al. (2013) purported that coworkers support shaped employees' intentions to leave. An increase in disassociations with coworkers proved to be a symptom of a progressive shift to job dissatisfaction in an employee (Shih et al., 2013). Dinger et al. posited that coworker relationships create a sense of embeddedness that reduces turnover. Tews et al. added that employees were inclined to stay longer with the organization when they had coworker support.

Job satisfaction and organizational commitment/loyalty. Organizational commitment is the psychological connection between an individual and his or her work and plays an important role in turnover (Cassell, 2014; Stanley, Vandenberghe, Vandenberg, & Bentein, 2013). A committed employee is one who is loyal to an organization through good and bad times (Cassell, 2014). Kasekende, Byarugaba, and Nakate (2013) examined the employee satisfaction and the mediator of organizational service orientation in a school district in Uganda and suggested that employees are committed to the organization when there was a high level of job satisfaction. Other scholars have investigated the relationship between organizational commitment, job

satisfaction, and turnover and have reported similar findings (Major, Morganson, & Bolen, 2012). For example, Jeon et al. (2013) studied the effects of software developer's job satisfaction on organizational commitment and turnover intentions, and noted an association between job satisfaction and organizational commitment. Similarly, Jung and Kim (2013), and Kanwar, et al. (2012) examined the relationship between job satisfaction, organizational commitment, and turnover and reported similar findings that an association existed between the three variables. A volatile economy helped modify employees' perceptions of job loyalty, with the somewhat common practice of outsourcing further emphasizing the employee's obligation to stay with an employer when new opportunities arise (Chan & Dar, 2014). Chan and Dar (2014) suggested that employers could capitalize on employer-employee relationships by maintaining open communication and providing better career choices.

Job satisfaction and training. Ashar et al. (2013) suggested that there was a positive association between training and employee commitment; therefore, training should be used as a human resource (HR) tool to reduce turnover (Nwokocha & Iheriohanma, 2012). Ashar et al. added that training caused employees to have a sense of emotional attachment to the organization by giving the perception that the organization cared about employee's well-being, and were less likely to quit. Both Ashar et al. (2013), and Nwokocha and Iheriohanma (2012) conveyed that training can provide abilities, knowledge, and skills that enhance individual performance, which leads towards organizational performance. An organization that provides training opportunities to its employees gives the signal of care (Davey et al., 2013). These organizations are

attractive to the employees because of the emotional attachment to give something in return (Davey et al., 2013). Thus, workers are interested to stay in those organizations that offer training opportunities because it increases the employability (Ashar et al., 2013; Davey et al., 2013).

Employers could motivate employees by cross-training because cross-training prevents stagnation. Furthermore, cross-training provides learning opportunities for professional development that may foster a holistic view of the organization as a whole (Arunkumar & Parimala, 2012). Organizations should invest in employee training programs to enable employees to acquire knowledge, skills, and competencies in a changing work environment (Nwokocha & Iheriohanma, 2012).

The professional knowledge and technical skill of an IT professional could become obsolete because of the rapid advancement in the field of information technology (Ertuk & Vergun, 2014). Information technology professionals require specific qualifications, knowledge, and skills to manage organization's information technology infrastructures (Mohlala et al., 2012). The lack of training may cause IT professionals to feel threatened and less competent. The review of literature supports the notion that training may reduce employee turnover (Nwokocha & Iheriohanma; 2012).

Job satisfaction and communication. Knowledge sharing plays a critical role in employee job satisfaction (Tong et al., 2013). With the advent of computer technology, one-on-one communication has experienced a drop in interpersonal relationships both inside and outside the workplace environment. It is easier to text or use email than to call by phone or visit an employee in person. This shift in technology has shown human

communication has suffered, and information provided along these lines can be misinterpreted or misrepresented amidst the sterile conduit of technological means (SreeRekha, 2013).

Organizations, where management supports its employees by applying the simplest measure of increasing personal communication among peers and supervisors alike, experienced a rise in employee organizational commitment (SreeRekha, 2013). Moreover, when employees are directly involved in decision making and encouraged to share knowledge among teams, trust in the corporate climate has shown improvement as well as motivational and attitudinal changes (Tong et al., 2013). Irrespective of an organization's management style, communication lies at the core of leaders' abilities to allow employees to voice concerns about their jobs and to express stressors connected to their positions, which in turn increases job satisfaction and may reduce turnover (Alias et al., 2014).

Job dissatisfaction. Job dissatisfaction is a precursor to turnover (Abii, Ogula, & Rose, 2013; Jung & Kim, 2012). Herzberg (1959) asserted that hygiene factors cause employees to be dissatisfied, which can lead to turnover intentions. Jeon et al. (2012) supported Herzberg's theory and suggested that hygiene factors, such as rewards, work/life balance, and the work itself can lead to employee dissatisfaction and turnover. The review of literature indicated that burnout and stress are two common hygiene factors that cause IT professionals to be dissatisfied (Arshadi & Shahbazi, 2013).

Burnout. A number of scholars have studied burnout among IT professionals and have reported similar findings that suggest that burnout adversely affects job satisfaction

(Gupta & Charu, 2013; Jung & Kim, 2012; Shih et al., 2013). In their quantitative study, Gupta and Charu (2013) examined the association between burnout and job satisfaction among IT professionals in India and postulated that burnout affects the job satisfaction among IT professionals. Similarly, Shih et al. conducted a study in Taiwan by examining burnout and depersonalization among IT professionals and noted that exhaustion of IT workers contributes to poor job satisfaction. In addition, Jung and Kim (2012) examined the causes of burnout in a newspaper company in Korea and postulated that the burned out employees experienced increased turnover intentions.

Stress. A conflict between the demands of work, and the employee's ability to manage the demands, results in stress (Rao & Chandraiah, 2012). Stress impacts both the emotional and physical well-being of an individual and can lead to undesirable coping strategies at work such as poor decision-making skills, lack of motivation and creativity, or even the overuse of alcohol or liquor (Karumuri & Singareddi, 2014). Higher incidences of illness and absenteeism point to job stress as the main factor, with ample literature associating job stress and an employee's coping mechanism to feelings of well-being or ill-being (Rao & Chandraiah, 2012).

Information technology jobs in the software industry are stressful because of the pressure, overwork, forced overtime, and deadlines, all of which result in turnover intentions (Bisht & Singh, 2012). Bisht and Singh added that the stress level leaves less family time and fatigue, and affects one's personal life, which then influences turnover intentions to explore other opportunities. Elçi et al. (2012) added that work-related stress

contributes to errors, decrease in productivity, health-related problems, and increases in employee turnover.

Human resource (HR) policies. Retaining IT professionals is a difficult task for human resource management (Rahman & Nas, 2013). The lack of an effective human resource policy has caused talented employees to leave the organization (Sarwar, Hameed, & Aftab, 2013). Jyothi and Ravindran (2012) examined the association of job satisfaction against human resource policies of 264 IT employees working in 13 different IT companies in Bangalore, India. Jyothi and Ravindran found that some human resource policies about training, staffing, personal appraisal, remuneration, benefits, and working conditions had an impact on the job satisfaction of the IT employees. Similarly, Slavich et al. (2014) explored the link between human resource practices and turnover in multibrand companies and found an increase in employee job satisfaction with employee friendly human resource practices. Human resource policies and management play a key role in retaining employees by using motivational standards such as providing training and promotional opportunities within the organization (Jeon et al., 2013; Nasiripour et al., 2012). However, some human resource departments implement cost-cutting practices such as layoffs and eliminated bonuses, which are counterproductive and have a negative effect on employee satisfaction (O'Halloran, 2014). To counter the high turnover rate, business leaders should identify employees who are adaptable, possess problem-solving skills, and communicate well (Ghormade & Dongre, 2014; Lakshmi & Sohail, 2013).

Work/family life balance. In the review of the literature, the term work/family balance has been used interchangeably with work/life balance (Gupta & Charu, 2013).

The tradition work/family concept is based on the premise that employees are tasked to balance the responsibilities of family with work; however, times have changed, and employees are doing more than balancing work and family (Sharafi, 2012). The distinct change to a work/life balance concept is a result of employees who are tasked to manage other activities, such as recreation, leisure, travel, and hobbies (Gupta & Charu, 2013). Findings from an abundance of studies indicated a link between job satisfaction and work/family/life balance.

Gupta and Charu (2013) examined the relationship between work/life balance and job satisfaction among 100 employees in the IT industry in Gurgaon. Gupta and Charu concluded that employees with a work/life balance showed a higher level of job satisfaction. Organizations play an important role in work/life balance, as it was found that there was a significant difference in the level of stress among men and women (Gupta & Charu, 2013). Ryan and Harden posited that the number of women entering the IT career force has been lower than for men, even though worldwide, women are increasingly entering the workforce. LeRouge et al. (2013) postulated that a career in information technology is a less desirable choice, with job satisfaction—specifically, the work itself—and job security.

In some cultures, women are the primary caregivers and responsible for balancing family obligations together with job obligations, and maintaining the work/life balance status quo (Burns & Christie, 2013). Family-friendly policies heighten an organization's appeal in inviting new recruits to the IT field, especially among women (Aiswarya & Ramasundaram, 2012; Kanwar et al., 2012; Pietersen & Oni, 2014). Men are included in

the work/life/family conflict cycle. A one-career family is no longer the norm in today's society. In both developed and emerging nations, men have taken on a larger role in the household, with both spouses juggling career and family responsibilities equally (Aiswarya & Ramasundaram, 2012). With work and family considered the two most important roles in life, the incompatibility might create tension that can spill over into the workplace, an impetus to turnover intention (Aiswarya & Ramasundaram, 2012).

Aiswarya and Ramasundaram (2012) identified three types of work-family conflict from previous research on the subject: (a) time-based, meaning that time based on one domain affects the time spent in the other domain; (b) strain-based work, family-conflict, which implies that conflicting situations result when strain in one role impinges on the other role; and, (c) behavior-based conflict, defined as behavioral patterns needed among the two domains but can be incompatible. Collectively, positive job interactions may extend into one's personal and family life, increasing satisfaction, harmony, and balance. Negative job interactions carry over into family life with unfavorable consequences such as feeling unable to enjoy fully activities outside of the work place (Aiswarya & Ramasundaram, 2012).

Given the amount of research conducted on work/life/family conflict, organizational climate bears an influence on stress to both male and female employees but for different reasons. Kim (2012) concluded that male IT professionals are inclined to leave their position due to promotion or advancement opportunities. In contrast, family-friendly policies influence women to stay with an organization. Kanwar et al. (2012) noted a similarly divided opinion among levels of workplace satisfaction between

IT men and women professionals; however, the research proved to be inconclusive in terms of organizational commitment. Gupta and Charu (2013) posited that organizations play a key role in enforcing work/life balance policies in retaining valuable people.

Transition and Summary

Section 1 of this study contained information on strategies that some business leaders may use to reduce turnover rates among IT professionals in Houston, Texas. The section began with the background of the problem, the problem and purpose statements followed by the nature of the study, the research and interview questions, conceptual framework, operational definitions, assumptions, limitations, delimitations, and significance of the study. In Section 1, I discussed a review of the academic and professional literature that contained the conceptual framework. Herzberg's (1959) motivation-hygiene theory and March and Simon's (1958) process model of turnover provided the conceptual foundation for this study.

Section 2 includes the purpose statement, the role of the researcher, participants, research method and design, population and sampling, ethical research, data collection technique, data organization techniques, data analysis, and reliability and validity. In Section 3, I discuss the presentation of the findings, application to professional practice, the implication for social change, recommendations for action and future research, reflections, and a conclusion to the study.

Section 2: The Project

The purpose of this qualitative exploratory multiple case study was to explore the strategies needed by business leaders to retain IT professionals. I sought to gain a deeper understanding of the problem of turnover by conducting interviews with senior IT business leaders. In Section 2, I address various topics, including the role of the researcher, participants, research method, research design, population sampling, data collection and technique, data organization techniques, data analysis, and the reliability and validity of the study.

Purpose Statement

The purpose of this qualitative exploratory multiple case study was to explore the strategies needed by business leaders to retain IT professionals. Senior IT managers constituted the target population. I conducted interviews with managers located in Houston, Texas. This study contributes to social change by providing business leaders with a better understanding of employee retention strategies. This knowledge may result in reduced turnover rates among IT professionals.

Role of the Researcher

The researcher is the main instrument for data collection in qualitative research (Pezalla, Pettigrew, & Miller-Day, 2012). My role in this study included interviewing participants, analyzing data, and managing the interview process (Aluwihare-Samaranayake, 2012; Rubin & Rubin, 2012). I had prior experience and knowledge on the research topic after serving 20 years in the U.S. military as an IT officer. My other experience includes working as an IT manager in the private sector. I adhered to all

ethical protocols in accordance with the Belmont Report (U.S. Department of Health and Human Services, 1979) and completed the National Institute of Human web-based training course.

Bernard (2013) posited that a researcher's cultural background may contain biases and ideologies that may affect the study. Tufford and Newman (2012) added that bracketing interviews conducted prior to, during, and following data collection can uncover themes that may hinder the researcher's ability to listen to respondents or trigger emotional responses in the researcher that may foreclose on further exploration. Techniques for reducing bias on the part of the researcher include writing memos throughout data collection and analysis, engaging in interviews with an outside third party, and maintaining a reflective journal (Lamb, 2013; Tufford and Newman, 2012). I wrote memos and maintained a reflective journal to mitigate potential personal biases that I may have (Pezalla, et al., 2014).

In addition, I adhered to interview protocols by obtaining proper approval to conduct the interviews. I also maintained participants' confidentiality by implementing an alphabet and numeric coding system. I will secure and store the collected data in a safe location for a minimum of 5 years before permanently deleting all digital files and shredding hard copies.

Participants

Before collecting data, a researcher selects participants (Coenen, Stamm, Stucki, & Cieza, 2012; Englander, 2012). I selected the participants based on one of the following eligibility criteria: (a) serving as a senior IT professional with hiring authority;

(b) serving in roles such as chief information officer (CIO) or chief technology officer (CTO), vice president or senior vice president of information technology, IT director, information security manager, network manager, and IT project manager; and (c) working in Houston. I selected participants with senior level IT experience who had the appropriate qualification about the research topic (Hayes, Bonner, & Douglas, 2013; Marshall & Rossman, 2014). Prior to commencing this study, I obtained permission from the Walden University International Review Board (IRB) and obtained written permission from the two research sites to gain access to conduct research.

The relationship between the researcher and the participants is critical to the success of research (Gibson, Benson, & Brand, 2013). I obtained a list of prospective participants from the human resources departments of the two participating companies. I then emailed the prospective participants an introductory email (see Appendix A). The introductory email included the purpose of the study, criteria for selection, and the benefits of the study. I gained access to the participants by phone, emails, and face-to-face contact. Participants received no compensation for participating in this study. Their identities will remain anonymous to ensure confidentiality (Aluwihare-Samaranayake, 2012).

I used the fictional names CMP1 and CMP2 for the two companies and PT1 to PT10 for the 10 participants to maintain confidentiality and privacy (Thomas, 2015). Participants had the right to withdraw from the study at any time without penalties by notifying me by email, telephone, or in person (Aluwihare-Samaranayake, 2012; Gibson et al., 2013). All participants signed the informed consent form (see Appendix C)

acknowledging their willingness to participate in the study prior to being interviewed (Newington & Metcalfe, 2014; Zhou & Nunes, 2013). Data will remain stored on a password-protected computer and in a fireproof safe for a minimum of 5 years and deleted thereafter.

Research Method and Design

There are three types of research approaches: quantitative, qualitative, and mixed methods (Klassen, Creswell, Clark, Smith, & Meissner, 2012). Researchers need to select a design suitable for answering their research questions (Hayes et al., 2013; Marshall & Rossman, 2014). In research similar to this study, Thomas (2015) justified the use of a qualitative exploratory case study to explore strategies for retaining IT professionals in Atlanta, Georgia.

Research Method

There are five categories of qualitative research methods: narrative, phenomenology, grounded theory, ethnography, and case study (Szyjka, 2012; Uluyol & Akçi, 2014). Dalton (2013) asserted that researchers use a qualitative research method to seek a comprehensive viewpoint of participants' lived experiences and perspectives (Sargeant, 2012; Sirichoti & Wall, 2013). Qualitative research is useful to researchers who seek to understand participants' first-hand experiences and their expression (Coenen et al., 2012; Kramer-Kile, 2012). I believe that a qualitative research method was suitable for this study because I sought to obtain an in-depth analysis and understanding of the problem of turnover among IT professionals in Houston, Texas (Uluyol & Akçi, 2014).

My review of the literature indicated that a set of common factors such as job satisfaction, pay, recognition, and one's relationship with a supervisor contributes to the high turnover rate among IT professionals (Shahin, 2014). A qualitative research method was beneficial for me to build a rapport with the IT managers, conduct interviews, ask open-ended questions, and observe the IT managers in their natural environment (Cibangu, 2013; Uluyol & Akçi, 2014; Wisdom et al., 2012).

Quantitative studies involve testing hypotheses and analyzing numbers (Klassen et al., 2012). Researchers use a quantitative research method to examine the relationship between dependent and independent variables and to show cause and effect (Lunde, et al., 2013; Morley, 2012). I opted not to use a quantitative approach because my aim was to seek a better understanding why IT professionals leave organizations and not to analyze numbers (Uluyol & Akçi, 2014).

The mixed method research involves the use of a combination of qualitative and quantitative data to increase breadth to the study and answer research questions (Klassen et al., 2012; Wisdom et al., 2012). Some researchers suggest the mixed-method approach when there is a lack of qualitative or quantitative data to understand the problem, or when further explanation is needed (Metcalf, Hess, Danes, & Singh, 2012; Terrell, 2012; Wisdom et al., 2012). I did not use the mixed method research because my aim was to gain an in-depth understanding of the problem of turnover and not to quantify data.

Research Design

I used a multiple case study design for this study because case studies are appropriate when the researcher seeks to answer "how and why" questions and requires

flexibility to ask open-ended questions (Sargeant, 2012; Uluyol & Akçi, 2014). Case studies involve data collections methods such as observations, interviews, and documents (Yin 2014).

There are three types of case studies: exploratory, explanatory, and descriptive (Yin, 2014). Guo et al. (2013) used a qualitative exploratory case study to conduct in-depth interviews to explore the return of Chinese repatriates. Thomas (2015) applied the exploratory case study design to interview senior IT managers in Atlanta, Georgia. Yin (2014) added that the exploratory case study design enables the researcher to analyze the data from the interview. Also, Newman, Joseph, and Feitosa (2015) posited that multiple cases add external validity and guard against observer bias; therefore, multiple case studies are a more effective strategy to test theory than the single case study (Landers & Behrend, 2015). I used a multiple exploratory case study for this study because the exploratory case study design was suitable for me to conduct in-depth interviews and to analyze the data (Yin, 2014). I conducted one-on-one interviews with the participants and used a voice recorder to record the interview (Guo et al., 2013).

The grounded theory design was not appropriate for this study because grounded theory involves building theory for large groups by collecting and analyzing qualitative data (Bey, 2012). Zarif (2012) asserted that grounded theory incorporates systemic procedures to interpret events. Although the works of Herzberg's (1959) motivation-hygiene theory and the March and Simon (1958) process model of turnover provided a conceptual foundation for this study, my focus was not to test existing theories but to gain a deeper understanding of the research question.

The ethnography design involves studying a cultural group and requires researchers to immerse themselves in the real world of the phenomenon (Cibangu, 2013). Ethnography research can be expensive and time-consuming because of the abundance of time required for observation of a culture (Cunliffe & Karunanayake, 2013). My focus was not to immerse myself in a particular group to study a culture; instead, I observed, interviewed, and collected data that answered the research question (Marshall & Rossman, 2014; Yin, 2014). The ethnography research design was not appropriate for this study.

The phenomenological design is ideal when exploring the human experiences and perceptions of the participants (Englander, 2012; Tessier, 2012). Englander further suggested that researchers use the phenomenological study to discover the meaning of a phenomenon. Rennie (2012) postulated that the phenomenological study is most suitable for understanding a phenomenon through the lenses of those with experiences. The use of the case study design was most appropriate to study the IT managers in their natural environment and to explore the research problem (Yin, 2013).

The narrative inquiry was not suitable for this study because narrative inquiry involves telling stories, autobiographies, art, and using field notes (Scutt & Hobson, 2013). Narrative analyzes the stories, individual experiences regarding a social phenomenon, to create themes for comparison to give meaning to words (Jhatial, Mangi, & Ghumro, 2012). I did not collect data through stories, autobiographies, art, and field notes. Instead, I interviewed participants and ask open-ended questions to gain a deeper understanding of the research problem (Yin, 2014).

Data saturation occurs when there is no new additional information collected; the themes are similar, no new coding and the study can be replicated (Coenen et al., 2012; Marshall, Cardon, Poddar, & Fontenot, 2013). Walker (2012) deduced that the sample size of the participants would determine data saturation, and Dworkin (2012) asserted that researchers reach data saturation using between five and 50 participants in qualitative studies. I interviewed 10 senior IT managers and conducted member checking to obtain data saturation (Dworkin, 2012).

Population and Sampling

The target population for this research was 10 senior IT leaders in the IT sector located in Houston, Texas. Qualitative researchers use the purposeful criterion sampling technique to set the criteria for participants who have the appropriate experience and qualification about the research topic (Grossoehme, 2014; Walker, 2012). Purposeful criterion sampling is appropriate for identifying participants with extensive expertise in a specific area (Moss et al., 2014; Trotter, 2012). In this study, I used purposeful criterion sampling to identify the experts in the information technology industry (Palinkas et al., 2013).

I selected a sample of successful IT leaders who met one of the following criteria: (a) served as a senior IT professional with hiring authority or (b) served in roles such as chief information officer (CIO) or chief technology officer (CTO), vice president or senior vice president of information technology, IT director, information security manager, network manager, and IT project manager. All worked in Houston, Texas. I selected participants with extensive knowledge in the information technology industry.

Trotter (2012), and Walker (2012) asserted that the sample size should address the research questions and determine data saturation. Englander (2012) added that the sample size should be large enough to answer the research questions. Dworkin (2012) posited that qualitative researchers reach data saturation with a sample size of between five and 50 participants. I interviewed 10 senior IT managers and conduct member checking to obtain data saturation (Dworkin, 2012). I focused this research on experts in the IT industry with enough involvement in workforce management to have a complete grasp of the main research topic (Thomas, 2015).

Ethical Research

The treatment of research participants is instrumental to research study. I received approval from the Walden University Institutional Review Board (IRB) (IRB approval # 02-29-16-0185281) prior to collecting data. After obtaining approval from the IRB, I selected a research site, participants, and requested permission from the site to conduct the study. I provided informed consent forms (see Appendix C) to the participants to acknowledge confidentiality and protected their rights during the data collection process (Newington & Metcalfe, 2014). All the participants signed the informed consent form acknowledging their willingness to participate in the study and consenting to audio recordings of the interviews (Zhou & Nunes, 2013).

This study was voluntary, and participants did not receive compensation for participating. The name of the companies and participants will remain anonymous to ensure confidentiality (Aluwihare-Samaranayake, 2012). The participants' names do not appear on the consent form, interview form, nor documented anywhere in this study. I

used fictional names CMP1 and CMP2 for the two companies, and PT1 to PT10 for the 10 participants to maintain confidentiality and privacy (Aluwihare-Samaranayake, 2012). Participants had the right to withdraw from the study at any time by notifying me by email, telephone, or in person without penalties (Aluwihare-Samaranayake, 2012; Gibson et al., 2013). The collected data will remain stored on a password-protected computer and in a fireproof safe for a minimum of 5 years and deleted thereafter.

Data Collection Instruments

I was the primary data collection instrument. I used a semistructured interview technique to collect data (Pezalla et al., 2012). By asking open-ended questions, I gathered the experiences and perceptions of 10 IT business leaders regarding their strategies in reducing the high turnover among IT professionals (Thomas, 2015).

By asking open-ended questions, the participants answered the interview questions freely in such a way that enabled them to expand their responses (Englander, 2012; O’Keeffe, Buytaert, Mijic, Brozovic, & Sinha, 2015). I implemented probing questions as needed, obtaining data saturation (Newington & Metcalfe, 2014). Data saturation occurred when there was no new additional information collected and the themes were similar (Coenen et al., 2012). According to Petty et al. (2012), member checking is the most effective way to establish credibility in qualitative studies. I demonstrated member checking by allowing the participants to review and validate their interview transcript.

Data Collection Technique

Prior to commencing the study and after IRB approval, I sent an invitation email to each participant, which included a brief background on the purpose of the study (see Appendix A). I emailed an informed consent form to each of the participants (see Appendix C) to confirm their willingness to participate in the study. Upon approval of the consent form, the participants acknowledged the confidentiality and protection of their rights in the study (Newington & Metcalfe, 2014; Zhou & Nunes, 2013).

After I gathered the 10 qualified, consenting participants, I selected a time that was most suitable for conducting the interview with each participant and scheduled a 30-minute interview session (Guo et al., 2013). I used three different methods to collect data. First, I conducted interviews using FreeConferenceCall.com and collected data from five of the 10 participants. FreeConferenceCall.com is a free conferencing service that recorded each interview session in a digital format. I transcribed the voice recorded interview to a Microsoft word document. Second, I conducted a face-to-face interview with one participant, recorded the interview with an Iphone-5, and took notes. Third, I received email responses to the interview questions from two participants. I emailed a copy of the interview questions to the participants for review prior to conducting the interview.

I interviewed 10 business leaders in the IT sector of Houston to reach data saturation (Dworkin, 2012). Coenen et al. (2012) posited that data saturation occurs when there is no new information collected and the themes are similar. The relationship between the researcher and the participant is instrumental in any research study (Pezalla

et al., 2012). I maintained a professional relationship with the participants throughout the duration of the study, given that the success of the research was dependent on the relationship between the researcher and the participants.

Data Organization Technique

Qualitative researchers use a research log to capture the key ideas presented by the participants about each of the interview questions (Jacob & Furgerson, 2012; Tessier, 2012). I used FreeConferenceCall.com to record each interview and transcribed the digital recording into a Microsoft word document. I used hand written notes for further analysis of the data and used the NVivo 10 software to store and organize the data (Guo et al., 2013; Pezalla et al., 2012). Qualitative researchers use a filing system to facilitate data organization (Thomas, 2015). I assigned alphanumeric codes of CMP1 and CMP2 for the two companies and PT1 to PT10 for the 10 participants to maintain confidentiality and privacy (Aluwihare-Samaranayake, 2012). All collected data will remain stored on a password-protected computer and in a fireproof safe for a minimum of 5 years and deleted thereafter.

Data Analysis

The purpose of this qualitative exploratory multiple case study was to explore strategies for reducing high turnover rates among IT professionals. The overarching research question of this study was: what strategies do business leaders need to retain IT professionals in Houston, Texas?

Participants answered the following questions:

1. What strategies do you use to reduce the turnover rate among IT professionals?
2. How effective are the retention strategies?
3. Why do you think IT professionals leave the organization?
4. How can you use your experiences and knowledge to retain IT professionals within the organization?
5. How do you think IT professionals perceive their contributions within the organization?
6. How do you reward or recognize an IT professional for remarkable contributions to the organization?
7. What development and training plans do you have for IT professionals?
8. What recommendations can you give how to reduce the turnover rate among IT professionals?

Qualitative researchers conduct methodological triangulation by collecting data from multiple sources (Walsh, 2013; Yin, 2013). I obtained methodological triangulation by collecting data from interviewing and observation (Petty, Thomson, & Stew, 2012). First in the data analysis process, I used a coding system to maintain confidentiality of the participants and companies, and to identify key themes emerged from the interview process (Jhatial et al., 2012; O’Keeffe et al., 2015). Qualitative researchers use a coding process to identify themes to strengthen the validity and reliability of data analysis (Mangioni & McKerchar, 2013). As noted several times previously, I used the fictional names CMP1 and CMP2 for the two companies and PT1 to PT10 for the 10 participants.

Second, I transcribed the digital recording into a Microsoft word document and analyzed the emerging themes using the NVivo10 software tool (Pezalla et al., 2012). I used the NVivo10 software for content analysis by classifying, sorting, and arranging the information (Thomas, 2015). In addition, the NVivo10 software examined the relationships in the data by identifying key themes from my text-based research log. Third, I focused on the key themes emerged from the interview transcript for consistency. An extrapolation of the key themes then addressed the research questions to achieve the main purpose of the study (Pardasani, Goldkind, Heyman, & Cross-Denny, 2012). Last, I correlated the key themes emerged from the interviews with the literature (including new studies published since writing the proposal) and the conceptual framework. The conceptual framework of this study was the Herzberg's (1958) motivation-hygiene theory also known as the two-factor theory. Data analysis helped correlate the motivation factors posited by Herzberg and include: (a) rewards and recognition, (b) opportunities and advancement, and (c) meaningful work.

Reliability and Validity

Reliability

The reliability and validity of research demonstrate the trustworthiness and credibility of the findings (Mangioni & McKerchar, 2013; Street & Ward, 2012). Reliability in qualitative studies refers to the researcher's ability to replicate the study and obtain consistent findings (Rennie, 2012). Researchers (e.g., Grossoehme, 2014; Mangioni & McKerchar, 2013) suggested that researchers document the research procedures in a research journal to validate the reliability of a study. Qualitative

researchers demonstrate reliability in research by: (a) documenting the process of data collection analysis and interpretation, (b) explaining the strategy used for the study, (c) explaining the selection of participants, and (d) articulating the roles of the researcher (Thomas, 2015). I ensured reliability in this study by documenting the sequences of data process and analysis, member checking, and triangulation (Grossoehme, 2014; Thomas, 2015).

Validity

Validity in qualitative research refers to the credibility or the persuasiveness of the study (Grossoehme, 2014). There are four proposed analogous criteria for qualitative studies: credibility, transferability, dependability, and confirmability (Marshall & Rossman, 2014). I demonstrated credibility, transferability, dependability, and confirmability through triangulation and member checking.

To ensure credibility, I used member checking, observation, and triangulation. Credibility refers to the trustworthiness, or the believability by the participants in the study (Petty et al., 2012). Researchers establish credibility by using strategies such as persistent observation, referential adequacy materials, peer debriefing, member checking, triangulation, negative case analysis and reflexive research journal (Petty et al., 2012).

To ensure transferability, I used purposeful criterion sampling and a reflexive research journal (Petty et al., 2012). Transferability refers to the extent that the findings of the qualitative research are context specific, not generalized, but could be transferred (Petty et al., 2012). In a similar study, Thomas (2015) justified the use of purposeful sampling to explore strategies to retain IT professionals in a metropolitan area in Georgia.

To ensure dependability, I recorded each interview word-for-word, transcribed verbatim, and used the computer software NVivo10 to code and analyze the data participant (Jacob & Furgerson, 2012). Dependability is the ability to repeat the study and understand the variations (Petty et al., 2012). Furthermore, I used member checking by allowing the participants to review and validate the data.

To ensure confirmability, I documented the procedures. Confirmability in research is the extent that the results of the study are a product of the research and not the researcher's bias (Petty et al., 2012). Researchers use reflexivity to disclose their personal experiences and biases that could influence the study (Petty et al., 2012).

Qualitative researchers use coding technique, description of data instrument, and coordinate with proper presentation technique to demonstrate rigor (Srivastava & Misra, 2014). In a similar study to explore strategies to retain IT professionals, Thomas (2015) used member checking to demonstrate validity. In this study, I used member checking to achieve validity because member checking is the most effective way to establish credibility in qualitative studies (Petty et al., 2012). I demonstrated member checking by interviewing 10 senior IT managers to gain a deeper understanding of the research problem and then shared the findings and interpretations with the participants for validation (Thomas, 2015). Furthermore, I asked open-ended questions and probed participants to gain a comprehensive perspective on the problem of turnover (Thomas, 2015).

Qualitative researchers use triangulation to demonstrate the validity in research (Walsh, 2013). Methodological triangulation involves collecting data from multiple

sources to establish validity in case studies (Yin, 2013). Thomas (2015) justified the use of methodological triangulation to collect data from multiple sources. I used the triangulation method to collect data from multiple sources such as interviewing and observation (Petty et al., 2012; Walsh, 2013).

Transition and Summary

Section 2 of this study contained information on my role as the researcher, participants, research method and design, population and sampling, ethical research, data collection technique, data organization techniques, data analysis, and reliability and validity. In Section 2, I included the justifications for using the qualitative exploratory multiple case study design, purposive criterion sampling technique, and interviews with open-ended questions. In Section 3, I present the findings, application to professional practice, the implication for social change, recommendations for action and future research, reflections and a conclusion to the study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative exploratory multiple case study was to explore the strategies needed by business leaders to retain IT professionals. Based on my interviews with leaders based in Houston, Texas, I identified one overarching theme and eight subthemes. Job satisfaction was the overarching theme. The eight subthemes were compensation, opportunity and advancement, rewards and recognition, relationship with the supervisor and coworkers, training and development, communications, meaningful work, and flexible work schedule. Findings from this study confirm that job satisfaction is one of the most common determinants of turnover among IT professionals. Section 3 includes presentation of the findings, application to professional practice, the implication for social change, recommendations for action and future research, reflections, and a conclusion to the study.

Presentation of the Findings

The overarching research question of this study was: what strategies do business leaders need to retain IT professionals in Houston, Texas? Job satisfaction was the primary theme that emerged from my analysis of interviews. As noted previously, eight subthemes also emerged from data analysis: compensation, opportunity and advancement, rewards and recognition, relationship with the supervisor and coworkers, training and development, communications, meaningful work, and flexible work schedule.

Overarching Theme: Job Satisfaction as the Common Precursor for Turnover

Job satisfaction is the most studied precursor to turnover among IT professionals (Gamage & Buddhika, 2013; Guha, 2014; Jeon et al., 2013). Among all organizational behaviors, it is also the most frequently studied construct in the field of human resource management (Al-Salemi, 2013; Bajwa et al., 2014; Jung & Kim, 2012). The bulk of references used in this study indicates a link between job satisfaction and turnover.

In my study, I define job satisfaction as an IT professional's positive feelings toward their job (see Jyothi & Ravindran, 2012). When asked why IT professionals leave their jobs, all 10 participants mentioned lack of job satisfaction, echoing past research (Steinberga & Smite, 2013; Zhang et al., 2012). For example, Nwokocha and Iheriohanma (2012) posited that employees would stay longer with their company if they were satisfied with their jobs. Bajwa et al. (2014) added that increased job satisfaction would lead to decreased turnover rates.

Subtheme 1: Compensation

Interview Questions 3 and 6 explored the reasons why IT professionals leave their jobs and the strategies that managers can use to retain them. Compensation, which includes pay and benefits, is one influential factor contributing to the job satisfaction among IT professionals, reflecting past research (see, e.g., Patil & Sharma, 2014). PT3 stated, "IT professionals leave for more money, opportunities, and benefits and that they can only focus on what they perceive their net worth is through salary and compensation."

Successful companies pay their IT employees a competitive salary (Panaccio et al., 2014). PT2 and PT3 both posited that competitive pay was an effective strategy for retaining talented IT professionals. In responding to Interview Question 1, PT2 said, “We definitely do company evaluations of people’s salary to make sure it’s at the right place where it should be based on the role and the amount of work that everyone is doing.” PT2’s statement is consistent with the findings from Patil and Sharma (2014), who found that organizations with effective pay strategies gain competitive advantages in attracting and retaining employees.

Pay was not the only reason why IT professionals leave their jobs, according to the participants. For example, PT1 and PT2 asserted that some IT professionals leave one job for another job with lesser pay, which implies that IT professionals leave for other reasons than pay. In a similar study on IT professionals, Raman et al. (2013) found that, even though some Indian software companies provided good salary packages, employees left for other jobs.

PT2 stated,

I think that IT professionals leave organizations when they do not feel supported. When they don’t feel supported by their direct manager or they are not aligned with the strategy, or know what the development strategy may be. I know people have left before when they felt like they weren’t able to necessarily be creative and innovative in a particular space. In my mind, IT should be charged with being able to be innovative and creative with technology. I know people who have left for that. I also know compensation again and I think it is important to

some people; and if there's a better offer. For example, if there is a competing offer or something more appealing, then people will leave for just pure personal reasons, and not just for compensation.

Evidence from the review of literature supports the notion that a combination of other factors such as an adverse supervisor relationship, lack of recognition, and lack of advancement opportunities may lead to turnover among IT professionals. Asaduzzama et al. (2014) suggested that other factors such as growth, working environment, supervision, and promotion determine IT professionals' job satisfaction. PT7 stated that IT professionals look at their total compensation packages, including health care, insurance coverage, flexible hours, alternate working schedules, and bonus programs.

The emergent subtheme compensation coincides with the Herzberg (1958) two-factor theory on job satisfaction. Herzberg asserted that motivation factors are intrinsic to the job and include recognition and advancement which increases employee's job satisfaction. Conversely, hygiene factors, such as inadequate, pay cause dissatisfaction. IT professionals may become dissatisfied with their compensation and leave for another job that offered a better package. PT2 suggestions on strategies to reduce turnover rates are consistent with the Herzberg two-factor theory. PT2 and PT6 suggested that business leaders should develop strategies that include competitive pay, recognition, rewards, advancement, stock options, club membership, and to create an organizational culture that fosters creativity and innovation.

Subtheme 2: Opportunity and Advancement

The lack of advancement opportunities for IT professionals has contributed to turnover (Al Battat & Som, 2013). PT1 asserted that advancement opportunities provide IT professionals with a sense of accomplishment. According to Kim (2014), turnover intention decreases when employees perceive that they have opportunities to advance in their job. Conversely, turnover intention increases if employees perceive that they have limited personal development and promotional opportunities.

The participants in this study suggested that providing IT professionals with the opportunity to advance and grow within the organization influenced their job satisfaction. PT10 stated, "I give them opportunities to help other offices, so they can meet the people they support, or other offices can see how good they are." PT10 suggested that supervisors should layout career goals, set measurable expectations, be consistent, provide a good career path, and help employees achieve their goals.

PT4 noted that some lower-level IT professionals remain in the same position for a long time, which limits advancement opportunities. Forty percent of the participants noted that IT professionals seek jobs that promote innovation, creativity, and advancement. Respondents suggested that if the organization does not foster a culture of innovation and creativity, some IT professionals might leave. In a similar study, Chang et al. (2012) explored the career anchors and disturbances influencing turnover decisions of IT professionals in Taiwan and postulated that IT professionals value creativity, technical competence, and work that is challenging. IT professionals may consider leaving one company for another that offered advancement opportunities. PT7 stated,

“Most IT professionals are technologically savvy and want to work on the latest technology. If you're not giving them the opportunity to stay on the cutting edge or even bleeding edge they might disappear.”

PT6 said,

I think the annual budget should be divided up between keeping the lights on and maintenance, and then some given to strictly innovation projects. Also, those innovation projects are the ones that are exciting and will raise the level of morale, and keep the IT people on board.

Several participants suggested that business leaders promote IT professionals from within the organization, reflecting prior research from Oni and Pieterse (2014). PT7 mentioned that promoting from within the organization may improve employee's morale.

Several IT professionals required additional training and certification to stay abreast with technology and for advancement. Menon and Thingujam (2012) asserted that some IT professionals tend to work on cutting-edge software technologies that require the IT professionals to be knowledgeable to newer technology, and keep their certifications active.

PT1 noted,

There are certain certifications and standards that IT professionals require before they are even able to work on some projects so we can follow those same certification plans such as CCNA, CCNT, or any other Cisco certifications required for the industry.

Several senior level IT positions require a higher level of education, such as a master's degree or specific IT certifications. PT1 suggested that organizations should help pay for the expensive certifications because the employee will become more productive.

Subtheme 3: Rewards and Recognition

The participants indicated that a lack of recognition is a significant factor in turnover among IT professionals. The subtheme of rewards and recognition emerged from Interview Questions 5 and 6. Eighty percent of the participants posited that some IT professionals believe that their boss did not appreciate their contributions. PT1 stated, "When they do not feel like part of a team they will be unhappy; therefore, managers should make them feel a sense of teamwork." PT6 added that IT professionals understand that they make valuable contributions to the organization; however, the lack of communication and transparency causes them to feel undervalued.

Recognizing an IT professional for their contributions creates a sense of appreciation that their work is valued. PT6 stated, "If the person is just sitting in a cube executing some IT work, and they don't see how they are adding value, you are either going to demoralize them, or they'll just quit." Interviewees suggested business leaders can use non-monetary strategies reward or recognize IT professionals, such as writing a thank-you note or taking the employee to lunch.

Similarly, PT1 recommended other tools such as a spot bonus, prizes, tickets to a game, or giving a certificate in front of their peers as retention strategies. In other words,

recognizing and rewarding IT professionals in front of a group can be more effective than giving a monetary reward.

Subtheme 4: Relationship with Supervisor and Coworkers

In response to Interview Questions 3, 5, and 8, findings indicate that a positive relationship with a supervisor and coworkers has a direct impact on IT professionals' job satisfaction. The literature supported the premise that a negative relationship or a mismatch between the employee and the supervisor leads to turnover (Grissom, 2012; Shukla & Sinha, 2013). Conversely, supervisor support can improve job satisfaction and reduce turnover rates. PT6 stated, "Employees do not leave companies; they leave their boss." PT2 corroborated with PT6 and added, "I think that IT professionals leave organizations when they don't feel supported by their direct manager."

PT7 posited that IT professionals are creative and innovative and want to make a difference at work. However, some supervisors oppose new ideas and revert to the traditional ways of doing things. The results support the notion that a friendly working environment where IT professionals feel valued will improve job satisfaction. Some participants suggested that supervisors should attempt to get to know their subordinates outside of the workplace to help improve the relationship.

Nasiripour et al. (2012) noted that the supervisor's leadership and management style plays a significant role in an employee's job satisfaction and can affect turnover rates. Menon and Thingujam (2012) conducted a study on IT professionals' job satisfaction in India and found that IT professionals preferred a better rapport with their supervisor than they do monetary or other benefits. PT3 suggested the following

strategies to help improve the supervisor and IT professional relationships: (a) listen to their concerns, (b) treat employees equally, (c) lead by example, (d) provide meaningful work, (e) show empathy, and (f) be open.

IT professionals develop interpersonal relationships with coworkers, which may influence them to stay with an organization (Dinger et al., 2012). Tews et al. (2013) noted that some employees stayed longer with an organization when they had coworker support. Vijayakumar (2012) added that when key employees leave an organization, other employees sometimes follow. A positive coworker relationship creates a sense of embeddedness, which reduces turnover. Strategies to improve coworker relationship include helping with work. Tews et al. (2013) purported that coworkers support shaped employees' intentions to leave.

Subtheme 5: Training and Development

The management of organizations' information systems requires specialized IT skills. The subtheme training and development emerged from Interview Questions 3 and 7. Ertuk and Vergun (2014) posited that IT professionals possess technical skills that could become obsolete because of the changes in technology. IT professionals are required to stay current with particular qualifications and competencies to do their job; therefore, the lack of training may cause IT professionals to feel threatened and less competent. Nwokocha and Iheriohanma (2012) found that training may reduce employee turnover. One participant suggested that managers should allow IT professionals to choose how they want to learn. For example, some IT professionals prefer learning in a classroom, while others prefer online computer based training.

Ashar et al. (2013) conducted a quantitative study on training and turnover intentions from a telecom and banking sector in Pakistan and found that turnover increased when training was not available. IT professionals feel a sense of commitment when their company invests in training and development; thus, managers should use training as a tool to retain IT professionals. PT2 stated, “Our company invests in our employees and that usually keeps them happy, and there’s a lot of longevity at the company.”

Ashar et al. (2013), and Nwokocho and Iheriohanma (2012) suggested that training could give employees new abilities, knowledge, and skills that enhance individual performance, which leads toward improved organizational performance.

Subtheme 6: Lack of Communication

The findings from the interviews indicate that IT professionals become frustrated with the lack of communication from their supervisors, which leads to turnover. The subtheme lack of communication emerged from Interview Questions 3, 5, and 8. In response to Interview Question 1, PT10 stated,

I make sure the employee knows our company policies, so there is no miss understanding. I communicate with my employees to make sure each person knows his or her job roles, what is expected, and I make them feel like they are part of the team.

Furthermore, PT10 added that it is important to communicate to the employee how they fit in the department and the company as a whole:

If someone does something wrong, I tell them the day they do it. I do not wait until their review to give them a list. I tell them that they now know what they did is wrong, and that is my issue to make sure they know it, if they continue to do it, it will be their issue where we will have to take some action.

SreeRekha (2013) posited that improving personal communication between the employees and supervisor would increase employee organizational commitment. Tong et al. (2013) added that when employees are directly involved in the decision-making process, the corporate climate has shown improvement as well as motivational and attitudinal changes.

PT1 echoed PT9,

Treat people like adults, tell them clearly what you expect from them, and again, feed them the big picture. Tell them how their part contributes to it and tell them the successes, failures, and what happens in the overall organization. They feel more engaged and more part of the team, and you are able to retain them longer. And again, pay is also a factor, but again I've found that people will be even willing to work for less if they think that what they are doing is going to be contributing to a bigger picture, or that they are all pulling in the same direction with the team.

PT9 stated that IT professionals sometimes leave organizations when there is poor communication between what the manager expects and what the employee is delivering.

PT9 stated,

If you're not giving them the big picture, if you're just keeping them in the dark and feeding them what little pieces you think they need, you end up losing them. . . . Disseminate as much information as you can so that they can use it to their advantage; when you don't do those things, you see people tend to get disinterested and start looking for other jobs.

Subtheme 7: Meaningful Work

Findings suggest that meaningful and challenging work increases job satisfaction among IT professionals. The subtheme meaningful work emerged from Interview Questions 3, 4, and 8. Limited information exists on the subtheme meaningful work within the review of literature. Two participants expressed concerns about providing meaningful work to keep IT professionals engaged. For example, PT1 stated, "We've found that the best way to retain IT professionals is not just with pay, but with also giving them something that is a challenge and telling them how their effort contributes to the overall success of the company." PT9 added, "I recommend giving people work of value, making them feel like they are doing something that is contributing to the bottom line of the company."

Subtheme 8: Flexible Work Schedules

The subtheme flexible work schedules emerged from Interview Questions 1 and 4. Pedersen and Jeppesen (2012) conducted a qualitative study on whether flexible work schedules facilitated work-life enrichment. Pedersen and Jeppesen found that organizations with flexible work schedules showed an increased in employee job satisfaction, which, in turn, increased productivity. The flexible work schedule enables

employees to manage personal life roles such as children's activities and family illness.

In addition, the flexible work schedule allows employees the time to engage in social activities outside of the workplace such as hobbies (Pedersen & Jeppesen, 2012).

Gupta and Charu (2013) purported that IT professionals in Gurgaon, India, showed a higher level of job satisfaction with a work/life balance. According to Pedersen and Jeppesen (2012), employees showed high levels of job satisfaction and organization commitment with a flexible work schedule. Pedersen and Jeppesen postulated that employees showed their gratitude for flexible work schedules by working harder for the organization. PT6 and PT7 supported the claim that flexible work schedules improve job satisfaction among IT professionals.

Findings from this study indicate that telecommuting among IT professionals might improve job satisfaction and reduce turnover rates. PT7 asserted that telecommuting gives employees more control over their work and increases job satisfaction. In some cases, telecommuters are more productive than employees working in a company office. Findings from this study indicate that some IT professionals are more productive in an uninterrupted working environment, as well as having the flexibility to balance personal life. Some companies can cut operating cost such as space and mitigate staffing problems by allowing employees to work from home. Telecommuting enables people with disabilities to become more comfortable working from home.

However, telecommuting has some disadvantages. For example, IT professionals may become alienated from the organization and their coworkers. In addition, the lack of

face time with supervisors may affect telecommuter's advancement opportunities. Furthermore, telecommuters may be difficult to manage, negatively affect team-building, and spend additional time on personal matters. Workers in an office share knowledge, experiences, and work together as a team. Some of that team-building and sharing of knowledge remains lost because of telecommuting. There are experiences and knowledge that is shared in an office

Conceptual Framework and the Findings

The conceptual framework of this study was Herzberg's (1958) motivation-hygiene theory, also known as the two-factor theory, and March and Simon's (1958) process model of turnover. Herzberg postulated that motivation factors such as (a) achievement, (b) recognition for achievement, (c) responsibility for task, (d) interest in the job, (e) advancement to higher-level tasks, and (f) growth leads to employee job satisfaction. Hygiene factors such as inadequate salary, job security, and poor working condition cause employees dissatisfaction. Herzberg's findings are consistent with other research in this study. For example, Asaduzzama et al. (2014) asserted that pay, promotion, supervisor and employee relationships affected the job satisfaction of employees. Similarly, LeRouge et al. (2013) posited that job security, work itself, work/life balance, and advancement/opportunities provide employee job satisfaction. As applied to this study, PT1, PT2, and PT3 confirmed Herzberg's theory that motivational factors such as recognition, advancement, and a positive supervisor relationship leads to job satisfaction. Conversely, hygiene factors such as inadequate pay may lead to an increase in turnover rates.

Applications to Professional Practice

The results of this study can apply to human resource strategies to reduce turnover rates among IT professionals. Business leaders may gain a better understanding of why IT professionals leave and, as a result, they can implement strategies to reduce turnover rates. For example, the participants indicated that pay is a common precursor to turnover among IT professionals. Business leaders can offer competitive pay, spot bonuses, and stock options as a retention strategy to retain their most talented employees.

Nwokocha and Iheriohanma (2012) posited that IT professionals might quit if there is no training opportunities available. Ashar et al (2013) added that training caused employees to have a sense of emotional attachment to the organization by giving the perception that the organization cares about employee's well-being, and they were less likely to quit. When organizations provide training opportunities, employees feel a sense that the organization cares about their development. Business leaders should use training as an HR tool to reduce turnover (Nwokocha & Iheriohanma, 2012). An additional strategy noted was offering tuition reimbursement for education.

IT professionals seek nontraditional benefits, such as a flexible working schedule and the option to telecommute to manage personal life roles, such as children's activities, and to engage in social activities outside of the workplace. Employees experience a higher level of job satisfaction and organization commitment with flexible working hours (Pedersen & Jeppesen, 2012). Managers should implement a flexible working schedule and offer the option to telecommute to improve IT professionals' job satisfaction.

Previous studies have indicated that employees will leave if there is lack of advancement opportunities in the company. PT7 suggested that business leaders should implement strategies such as a mentoring program, job rotation, and promote from within the organization. Tuzun and Kalemci (2012) noted that perceived supervisor support reduces turnover intentions. In that regard, PT6 stated, “Employees don’t leave their jobs; they leave their boss.” Managers should develop a good relationship with their employees.

Implications for Social Change

The findings contribute to social change by adding knowledge about the overall study of turnover, which could help reduce turnover rates in different industries. Business leaders may gain a better understanding of ways to improve employee satisfaction and develop strategies to reduce turnover rates among IT professionals. Turnover affects individuals, families, communities, organizations, and the economy. Implementing strategies to reduce turnover rates can keep individual employees and their families together, reduce the unemployment rates for the economy, and fill gaps within organizations to increase productivity.

Recommendations for Action

Job satisfaction is the most common precursor to turnover among IT professionals. I recommend that business leaders develop strategies that specifically focus on IT professionals’ job satisfaction to reduce turnover rates. Bisht and Singh (2012) noted that the rapid growth of information technology has created high job availability and employment opportunities for IT professionals. The March and Simon

(1958) process model of turnover theory is consistent with the findings postulated by Bisht and Singh. March and Simon explored employees' perceived job alternatives and the ease of movement from one job to another, and explained that employees were more likely to quit their current job if there were alternatives. In conducting this research, I found that traditional retention strategies are ineffective at retaining IT professionals in today's competitive market. Hence, IT professionals may experience job dissatisfaction with a traditional retention strategy and would be more likely to seek another job.

The results suggest business leaders should implement more modern retention strategies that focus on job satisfaction—for example, (a) offering flexible working schedules to provide a work/life balance for IT professionals, (b) providing quarterly training to managers to develop interpersonal relationships with IT professionals, (c) improving communications, (d) allocating an annual budget for training so that IT professionals can improve their technical skills and maintain their certifications, and (e) providing meaningful and challenging work for IT professionals. I will disseminate the results of this study to various stakeholders, such as my place of employment, conferences, business journals, and training seminars.

Recommendations for Further Study

The aim of this study was to explore strategies that business leaders need to retain IT professionals in Houston, Texas. In conducting this study, I found that the bulk of the research done on turnover among IT professionals consists of quantitative studies, in which researchers examined the causes and effects of turnover (Hancock et al., 2013). However, few researchers have conducted qualitative studies on strategies to reduce

turnover rates. I recommend that researchers conduct mixed method studies to fill this gap. PT3 and PT7 posited that the emerging subtheme of meaningful work leads to job satisfaction among IT professionals; however, limited studies exist on the link between meaningful work and turnover. I recommend additional research should be conducted on meaningful work.

One limitation of this study was the geographical location of the study, Houston, Texas. Similarly, Thomas (2015) studied IT professionals in Atlanta, Georgia and reported similar findings. I recommend further studies in other large metropolitan cities such as New York, Chicago, and San Francisco. A second limitation of this study was that the sample size was limited to 10 IT professionals. The themes might be different with a larger sample size (Robinson, 2014). I recommend studying a larger sample size.

Reflections

In conducting this study, I realized that business leaders need a combination of different strategies to retain IT professionals. The information obtained from the interviews, supported by the findings from scholars within the review of literature, has changed my understanding of the research problem. Using purposive sampling criterion, I interviewed 10 experts who had appropriate experience and knowledge about IT professionals. The qualitative research method allowed me to study the participants in their current environment, and I gained an in-depth understanding to the research problem. Although each participant had a different perspective, the participants spoke freely and expressed themselves in such a way that enabled me to understand why IT professionals leave. As an IT professional, the findings from this study dispelled my

preconceived ideas and biases because I can now view the research problem through the lenses of 10 experts.

Summary and Study Conclusions

The high attrition rate among IT professionals has become a global problem and has posed significant challenges for business leaders. Direct and indirect costs have been associated with turnover among IT professionals; therefore, turnover is costly to the organization. I conducted semistructured interviews with 10 senior IT leaders; my aim was to gain a deeper understanding of the factors contributing to the high turnover rates among IT professionals. Eight subthemes emerged from this study, and I found that job satisfaction was the common reason IT professionals leave their job. More precisely, the findings indicate that pay was not the single reason why IT professionals leave; other factors include rewards and recognition, supervisor and coworker relationships, opportunity and advancement, training and development pay, and a flexible working schedule.

The findings from this study corroborate the conceptual framework by Herzberg (1959), who postulated that the lack of jobs satisfaction is a precursor to turnover among IT professionals. Furthermore, the findings support earlier research on IT professionals (e.g., Asaduzzama et al., 2014; Jyothi & Ravindran, 2012). Thomas (2015) noted that retaining IT professionals requires a system of strategies working as a whole. Business leaders should implement human resource strategies that focus on a combination of different strategies, such as flexible working schedules, meaningful work, opportunity and advancement, training, and a better employee and supervisor relationship.

References

- Abii, F. E., Ogula, D. C. N., & Rose, J. M. (2013). Effects of individual and organizational factors on the turnover intentions of information technology professionals. *International Journal of Management*, 30(2), 740–756. Retrieved from <http://www.theijm.com/>
- Agrusa, J., & Lema, J. D. (2012). An examination of Mississippi Gulf Coast Casino management styles with implications for employee turnover. *UNLV Gaming Research & Review Journal*, 11(1), 13-26. Retrieved from <http://digitalscholarship.unlv.edu/grrj>
- Aiswarya, B., & Ramasundaram, G. (2012). A study on interference of work: Life conflict between organizational climate and job satisfaction of women employees in the information technology sector. *Asia-Pacific Journal of Management Research and Innovation*, 8(3), 351-360. doi:10.1177/2319510X1200800315
- AlBattat, A. R. S., & Som, A. P. M. (2013). Employee dissatisfaction and turnover crises in the Malaysian hospitality industry. *International Journal of Business and Management*, 8(5), 62-71. doi:10.5539/ijbm.v8n5p62
- Alias, N., Noor, N., & Hassan, R. (2014). Examining the mediating effect of employee engagement on the relationship between talent management practices and employee retention in the Information and Technology (IT) organizations in Malaysia. *Journal of Human Resources Management and Labor Studies*, 2(2), 227-242. Retrieved from <http://jhrmls.com/>

- Al-Salemi, A. M. (2013). The impact of organizational justice on employee turnover, using Total EP Yemen. *African Journal of Business Management*, 7(37), 3810-3826. doi:10.5897/AJBM12.1424
- Aluwihare-Samaranayake, D. (2012). Ethics in qualitative research: A view of participants' and researchers world from a critical standpoint. *International Journal of Qualitative Methods*, 11(2), 64-81. Retrieved from <http://ejournals.library.ualberta.ca/index.php/IJQM/index>
- Anosike, P., Ehrich, L. C., & Ahmed, P. (2012). Phenomenology as a method for exploring management practice. *International Journal of Management Practice*, 5(3), 205-224. doi:10.1504/IJMP.2012.048073
- Anvari, R., JianFu, Z., & Chermahini, S. H. (2014). Effective strategy for solving voluntary turnover problem among employees. *Procedia-Social and Behavioral Sciences*, 129, 186-190. doi:10.1016/j.sbspro.2014.03.665
- Arokiasamy, A. R. (2013). A qualitative study on causes and effects of employee turnover in the private sector of Malaysia. *Middle-East Journal of Scientific Research*, 16(11), 1532-1541. doi:10.5829/idosi.mejsr.2013.16.11.12044
- Arshadi, N., & Shahbazi, F. (2013). Workplace characteristics and turnover intention: Mediating role of emotional exhaustion. *Procedia-Social and Behavioral Sciences*, 84, 640-645. doi:10.1016/j.sbspro.2013.06.618
- Arunkumar, M. S., & Parimala, S. (2012). Effectiveness of employee cross training on employee retention. *Life Science Journal*, 9(4), 649-652. Retrieved from <http://www.lifesciencesite.com/>

- Asaduzzama, M., Hossain, M. M., & Rahman, M. M. (2014). On identifying the motivating factors of job & career satisfaction of IT professionals in Dhaka city of Bangladesh. *Information and Knowledge Management*, 4(3), 77-86. Retrieved from <http://www.iiste.org/Journals/index.php/IKM>
- Ashar, M., Ghafoor, M., Munir, E., & Hafeez, S. (2013). The impact of perceptions of training on employee commitment and turnover intention: Evidence from Pakistan. *International Journal of Human Resource Studies*, 3(1), 74-88. doi:10.5296/ijhrs.v3i1.2925
- Bajwa, E. U., Yousaf, M., & Rizwan, M. (2014). Employee turnover intention in services sector of Pakistan. *International Journal of Human Resource Studies*, 4(2), 164-180. doi:10.5296/ijhrs.v4i2.5905
- Bernard, R. H. (2013). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Bey, C. (2012). Practical sustainability: From grounded theory to emerging strategies. *International Journal of Strategic Decision Sciences*, 3(3), 61-63. doi:10.4018/jsds.2012070105
- Bisht, N. S., & Singh, L. K. (2012). Understanding antecedents to attrition for employees with varying levels of experience in Indian software industry professionals. *Global Business and Management Research: An International Journal*, 4(1), 99-111. Retrieved from <http://gbmr.ioksp.com/>

- Burns, K., & Christie, A. (2013). Employment mobility or turnover? An analysis of child welfare and protection employee retention. *Children and Youth Services Review*, 35(2), 340-346. doi:10.1016/j.chilyouth.2012.11.014
- Butali, N. D., Wesang'ula, P. M., & Mamuli, L. C. (2013). Effects of staff turnover on the employee performance of work at Masinde Muliro University of Science and Technology. *International Journal of Human Resource Studies*, 3(1), 1-8. doi:10.5296/ijhrs.v3i1.3111
- Cassell, M. C. (2014). *Organizational commitment and voluntary turnover of IT employees during an economic downturn*. (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations and Theses database. (UMI No. 3610623)
- Chan, W. S., & Dar, O. L. (2014). Boundaryless careers attitudes, employability and employee turnover: Perspective of Malaysian hospitality industry. *Research Journal of Applied Sciences, Engineering and Technology*, 7(12), 2516-2523. Retrieved from <http://www.maxwellsci.com/jp/j2p.php?jid=RJASET>
- Chang, C. L. H., Jiang, J. J., Klein, G., & Chen, H. G. (2012). Career anchors and disturbances in job turnover decisions: A case study of IT professionals in Taiwan. *Information & Management*, 49(6), 309-319. doi:10.1016/j.im.2012.08.002
- Chat-Uthai, M. (2013). Leveraging employee engagement surveys using the turnover stimulator approach: A case study of automotive enterprises in Thailand. *International Journal of Business and Management*, 8(6), 16-21. doi:10.5539/ijbm.v8n6p16

- Chitra, K., & Badrinath, V. (2014). Motivation: A catalyst to employee retention. *World Applied Sciences Journal*, 32(4), 605-610. doi:10.5829/idosi.wasj.2014.32.04.376
- Cho, D. H., & Son, J. M. (2012). Job embeddedness and turnover intentions: An empirical investigation of construction IT industries. *International Journal of Advanced Science and Technology*, 40, 101-110. Retrieved from <http://www.ijst.com>
- Cibangu, S. K. (2013). A memo of qualitative research for information science: Toward theory construction. *Journal of Documentation*, 69(2), 194-213. doi:10.1108/00220411311300048
- Coenen, M., Stamm, T. A., Stucki, G., & Cieza, A. (2012). Individual interviews and focus groups in patients with rheumatoid arthritis: A comparison of two qualitative methods. *Quality of Life Research*, 21(2), 359-370. doi:10.2307/41411730
- Cunliffe, A. L., & Karunanayake, G. (2013). Working within hyphen-spaces in ethnographic research: Implications for research identities and practice. *Organizational Research Methods*, 16(3), 364-392. doi:10.1177/1094428113489353
- Dalton, M. (2013). Developing an evidence-based practice healthcare lens for the SCONUL Seven Pillars of Information Literacy model. *Journal of Information Literacy*, 7(1), 30-43. doi:10.11645/7.1.1813

- Davey, R., Fearon, C., & McLaughlin, H. (2013). Organizational grief: An emotional perspective on understanding employee reactions to job redundancy. *Development and Learning in Organizations*, 27(2), 5-8. doi:10.1108/14777281311302012
- Dinger, M., Thatcher, J. B., Stepina, L. P., & Craig, K. (2012). The grass is always greener on the other side: A test of present and alternative job utility on IT professionals' turnover, *IEEE Transactions on Engineering Management*, 59(3), 364-378. doi:10.1109/TEM.2011.2153204
- Dworkin, S. L. (2012). Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior*, 41(6), 1319-1320. doi:10.1007/s10508-012-0016-6
- Elçi, M., Şener, İ., Aksoy, S., & Alpkın, L. (2012). The impact of ethical leadership and leadership effectiveness on employees' turnover intention: The mediating role of work related stress. *Procedia-Social and Behavioral Sciences*, 58, 289-297. doi:10.1016/j.sbspro.2012.09.1003
- Englander, M. (2012). The interview: Data collection in descriptive phenomenological human scientific research. *Journal of Phenomenological Psychology*, 43(1), 13-35. doi:10.1163/156916212X632943
- Ertürk, A., & Vurgun, L. (2014). Retention of IT professionals: Examining the influence of empowerment, social exchange, and trust. *Journal of Business Research*, 67, 1-13. doi:10.1016/j.jbusres.2014.05.010
- Fidalgo, F., & Gouveia, L. B. (2012). Employee turnover impact in organizational knowledge management: The Portuguese real estate case. *Journal of Knowledge*

Management, Economics and Information Technology, 2(2), 1-16. Retrieved from <http://www.scientificpapers.org/>

Frey, R. V., Bayón, T., & Totzek, D. (2013). How customer satisfaction affects employee satisfaction and retention in a professional services context. *Journal of Service Research*, 16(4), 503-517. doi:10.1177/1094670513490236

Gamage, M. P., & Buddhika, M. (2013). Job satisfaction and intention to leave of IT professionals in Sri Lanka. *Asia Pacific Journal of Marketing & Management Review*, 2(9), 1-11. Retrieved from <http://indianresearchjournals.com>

Gao, F., Newcombe, P., Tilse, C., Wilson, J., & Tuckett, A. (2014). Models for predicting turnover of residential aged care nurses: A structural equation modelling analysis of secondary data. *International Journal of Nursing Studies*, 51(9), 1258-1270. doi:10.1016/j.ijnurstu.2014.01.011

Ghormade, K. V., & Dongre, P. (2014). Employability expectations of employers while recruiting engineers with special reference to electronics and related field engineering graduates. *International Journal on Human Resource Management*, 1(June), 18-22. Retrieved from <http://www.tandfonline.com/toc/rijh20/current>

Gibson, S., Benson, O., & Brand, S. (2013). Talking about suicide: Confidentiality and anonymity in qualitative research. *Nursing Ethics*, 20(1), 18-29. doi:10.1177/0969733012452684

Grissom, J. A. (2012). Revisiting the impact of participative decision making on public employee retention the moderating influence of effective managers. *The American*

Review of Public Administration, 42(4), 400-418.

doi:10.1177/0275074011404209

- Grossoehme, D. H. (2014). Overview of qualitative research. *Journal of Health Care Chaplaincy*, 20(3), 109-122. doi:10.1080/08854726.2014.925660
- Guha, S. (2014). The causal factors of employee turnover in Indian information technology sector: An exploration. *Aviskaar: A Xavierian Journal of Research*, 6, 18-25. Retrieved from <http://www.sxccal.edu/media/sxc-CollegeJournals.htm>
- Guo, C., Porschitz, E. T., & Alves, J. (2013). Exploring career agency during self-initiated repatriation: A study of Chinese sea turtles. *Career Development International*, 18(1), 34-55. doi:10.1108/13620431311130
- Gupta, S., & Charu, K. (2013). Analyzing work life balance and burnout as predictors of job satisfaction in IT industry of Gurgaon: A case study of IBM & WIPRO in 2008-10. *Journal of Business Management & Social Sciences Research*, 2(12), 1-7. Retrieved from <http://borjournals.com/a/index.php/jbmssr>
- Gurazada, A., & Rao, T. (2013). Employee turnover costs in IT industry: A critical analysis. *International Journal of Innovative Research and Practices*. 1(8), 23-27. Retrieved from <http://www.forum4researchers.com/mission.php>
- Haar, J. M., & White, B. J. (2013). Corporate entrepreneurship and information technology towards employee retention: A study of New Zealand firms. *Human Resource Management Journal*, 23(1), 109-125. doi:10.1111/j.1748-8583.2011.00178.x

- Hancock, J. I., Allen, D. G., Bosco, F. A., McDaniel, K. R., & Pierce, C. A. (2013). Meta-analytic review of employee turnover as a predictor of firm performance. *Journal of Management*, 39(3), 573-603. doi:10.1177/0149206311424943
- Hawk, S., Kaiser, K. M., Goles, T., Bullen, C. V., Simon, J. C., Beath, C. M., & Frampton, K. (2012). The information technology workforce: A comparison of critical skills of clients and service providers. *Information Systems Management*, 29(1), 2-12. doi:10.1080/10580530.2012.634292
- Hayes, B., Bonner, A., & Douglas, C. (2013). An introduction to mixed methods research for nephrology nurses. *Renal Society of Australasia Journal*, 9(1), 8-14. Retrieved from http://www.renalsociety.org/RSAJ/index_nl.html
- Herzberg, F. (1959). *The motivation to work* (2nd ed.) New York: John Wiley.
- Hong, E. N. C., Hao, L. Z., Kumar, R., Ramedran, C., & Kadiresan, V. (2012). An effectiveness of human resource management practices on employee retention in institute of higher learning: A regression analysis. *International Journal of Business Research and Management*, 3(2), 60-79. Retrieved from <http://www.ijmbr.org>
- Hoonakker, P., Carayon, P., & Korunka, C. (2013). Using the job-demands-resources model to predict turnover in the information technology workforce: General effects and gender differences. *Horizons of Psychology*, 22, 51-65. Retrieved from <http://psiholoska-obzorja.si/en/>

- Huang, C. J., & Hsueh, S. C. (2014). A study of the effect of incentive system on job performance: An example of hotel's IT staffs in Taiwan. *Journal of Global Business Management, 10*(2), 57-66. Retrieved from <http://www.jgbm.org/>
- Huffman, A. H., Casper, W. J., & Payne, S. C. (2014). How does spouse career support relate to employee turnover? Work interfering with family and job satisfaction as mediators. *Journal of Organizational Behavior, 35*(2), 194-212.
doi:10.1002/job.1862
- Hyett, N., Kenny, A., & Dickson-Swift, V. (2014). Methodology or method? A critical review of qualitative case study reports. *International Journal of Qualitative Studies on Health and Well-Being, 9*, 1-12. doi:10.3402/qhw.v9.23606
- Jacob, S. A., & Furgerson, S. (2012). Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *Qualitative Report, 17*(24), 1-10. Retrieved from <http://www.nova.edu/ssss/QR/>
- James, L., & Mathew, L. (2012). Employee retention strategies: IT industry. *SCMS Journal of Indian Management, 9*(3), 79-87. Retrieved from <http://www.scmsgroup.org/scmsjim>
- Jeon, H.-J., Lee, Y.-J., & Lee, J.-H. (2013). A study on the effects of software developer's job satisfaction on organizational commitment and turnover intension. *Journal of Society for e-Business Studies, 17*(4), 1-22. doi:10.7838/jsebs.2012.17.4.221
- Jhatial, A. A., Mangi, R. A., & Ghumro, I. A. (2012). Antecedents and consequences of employee turnover: Empirical evidence from Pakistan. *British Journal of*

- Economics, Management & Trade*, 2(4), 279-295. Retrieved from <http://www.sciencedomain.org/journal/20>
- Joarder, M. H. R., & Ashraf, M. A. (2012). Work satisfaction and employee turnover intentions: An empirical study. *East West Journal of Business and Social Studies*, 3,(1) 18-36. Retrieved from <http://www.ewubd.edu/ewu/showDocument.php?documentid=1285>
- Johnston, N., & Spinks, W. (2013). Organizational climate and employee turnover intention within a franchise system. *Journal of New Business Ideas & Trends*, 11(1), 20-41. Retrieved from <http://www.jnbit.org>
- Jung, J., & Kim, Y. (2012). Causes of newspaper firm employee burnout in Korea and its impact on organizational commitment and turnover intention. *The International Journal of Human Resource Management*, 23(17), 3636-3651. doi:10.1080/09585192.2012.654806
- Jyothi, B., & Ravindran, P. (2012). Employee job satisfaction in software and ITeS units in Bangalore: An empirical study. *Business Management Dynamics*, 2(6), 46-55. Retrieved from <http://www.bmdynamics.com/>
- Kabungaidze, T., Mahlatshana, N., & Ngirande, H. (2013). The impact of job satisfaction and some demographic variables on employee turnover intentions. *International Journal of Business Administration*, 4(1), 53-65. doi:10.5430/ijba.v4n1p53
- Kalemci Tuzun, I., & Arzu Kalemci, R. (2012). Organizational and supervisory support in relation to employee turnover intentions. *Journal of Managerial Psychology*, 27(5), 518-534. doi.10.1108/02683941211235418

- Kanwar, Y., Singh, A., & Kodwani, A. D. (2012). A study of job satisfaction, organizational commitment and turnover intent among the IT and ITES sector employees. *Vision: The Journal of Business Perspective*, 16(1), 27-35.
doi:10.1177/097226291201600103
- Karodia, A. M., Soni, D. S., & Cassim, N. (2014). Organizational development to increase an organizations effectiveness and competitiveness to improve employee satisfaction, productivity in order to strengthen the human process. *Singaporean Journal of Business Economics, and Management Studies*, 2(8), 15-23.
doi:10.12816/0003895
- Karumuri, V., & Singareddi, S. (2014). Employee attrition and retention: A theoretical perspective. *Asia Pacific Journal of Research*, 1(13), 182-186. Retrieved from <http://apjor.com/index.php>
- Kasekende, F., Byarugaba, K. J., & Nakate, M. (2013). Employee satisfaction: Mediator of organizational service orientation and employee retention. *Journal of Business and Management*, 19(3), 41-61. Retrieved from <http://www.chapman.edu/business/faculty-research/journals-and-essays/>
- Khan, M. A. (2014). Organizational cynicism and employee turnover intention: Evidence from banking sector in Pakistan. *Pakistan Journal of Commerce & Social Sciences*, 8(1), 30-41. Retrieved from <http://www.jespk.net/board.php>
- Khan, M. M. (2013). A study on trends and issues of employee turnover in education sector with special reference to professional and technical institutes in twin cities

- of UP. *International Journal of Emerging Research in Management & Technology*, 2(2), 13-17. Retrieved from <http://www.ermt.net>
- Khera, S. N., & Gulati, K. (2012). Job satisfaction: A ray of sunshine even in burnout times: Perceptual analysis of IT organizations. *International Journal of Management & Information Technology*, 1(3), 111-117. Retrieved from www.ijmit.com
- Kim, N. (2014). Employee turnover intention among newcomers in travel industry. *International Journal of Tourism Research*, 16(1), 56-64. doi:10.1002/jtr.1898
- Kim, S. (2012). The impact of human resource management on state government IT employee turnover intentions. *Public Personnel Management*, 41(2), 257-279. doi:10.1177/009102601204100204
- Klassen, A. C., Creswell, J., Clark, V. L. P., Smith, K. C., & Meissner, H. I. (2012). Best practices in mixed methods for quality of life research. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*, 21(3), 377-380. doi:10.1007/s11136-012-0122-x
- Kramer-Kile, M. L. (2012). Research column: Situating methodology within qualitative research. *Canadian Journal of Cardiovascular Nursing*, 22(4), 27-31. Retrieved from <http://pappin.com/journals/cjcn.php>
- Ladelsky, L. K., & Catană, G. A. (2013). Causes affecting voluntary turnover in IT sector: Review of some empirical studies. *Proceedings of the International Conference Marketing - from Information to Decision, Romania, 2013*, 102-113. Retrieved from <http://www.econ.ubbcluj.ro/mid/>

- Lai, J. Y., Chan, K. W., & Lam, L. W. (2013). Defining who you are not: The roles of moral dirtiness and occupational and organizational disidentification in affecting casino employee turnover intention. *Journal of Business Research*, *66*(9), 1659-1666. doi:10.1016/j.jbusres.2012.12.012
- Lakshmi, V. S., & Sohail, D. (2013). Crunch branding: The innovative HR tool to lead Indian Incorporation in creating favorable employer branding and employee retention. *Human Resource Management*, *54*, 12507-12512. Retrieved from <http://www.tandfonline.com/toc/rijh20/current>
- Lamb, D. (2013). Promoting the case for using a research journal to document and reflect on the research experience. *Electronic Journal of Business Research Methods*, *11*(2), 84-92. Retrieved from <http://www.ejbrm.com/main.html>
- Landers, R. N., & Behrend, T. S. (2015). An inconvenient truth: Arbitrary distinctions between organizational, mechanical turk, and other convenience samples. *Industrial and Organizational Psychology*, *8*(2), 142–164. doi:10.1017/iop.2015.13
- Latha, K. L. (2013). A study on employee attrition and retention in manufacturing industries. *BVIMSR's Journal of Management Research (BJMR)*, *5*(1), 1-23. Retrieved from <http://www.bvimsr.com>
- LeRouge, C. M., Wiley, J. W., & Maertz Jr, C. P. (2013). A comparison of job satisfaction between IT and non-IT women incumbents in clerical, professional, and managerial positions. *The Data Base for Advances in Information Systems*, *44*(2), 39-54. doi:10.1145/2488968.2488972

- Limbu, Y. B., Jayachandran, C., & Babin, B. J. (2014). Does information and communication technology improve job satisfaction? The moderating role of sales technology orientation. *Industrial Marketing Management*, 43(7), 1236-1245. doi: 10.1016/j.indmarman.2014.06.013
- Łubieńska, K., & Woźniak, J. (2012). Turnover models for IT specialists. *International Journal of Advanced Business and Management Research*, 1(1), 72-83. doi:10.3846/bm.2012.111
- Lunde, A., Heggen, K., & Strand, R. (2013). Knowledge and power: Exploring unproductive interplay between quantitative and qualitative researchers. *Journal of Mixed Methods Research*, 7(2), 197-210. doi:10.1177/1558689812471087
- Maheswari, S. U., & Krishnan, J. (2014). Analyzing the role of demographic variables on employee retention factors in ceramic manufacturing industries in India. *Sai Om Journal of Commerce & Management*, 1(5), 1-6. Retrieved from <http://www.saiompublications.com/journal>
- Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2013). Analyzing the impact of HRIS implementations on HR personnel's job satisfaction and turnover intention. *The Journal of Strategic Information Systems*, 22(3), 193-207. doi:10.1016/j.jsis.2012.09.001
- Major, D. A., Morganson, V. J., & Bolen, H. M. (2013). Predictors of occupational and organizational commitment in information technology: Exploring gender differences and similarities. *Journal of Business and Psychology*, 28(3), 301-314. doi:10.1007/s10869-012-9282-5

- Malik, M. I., Sajjad, M., Hyder, S., Ahmad, M. S., Ahmed, J., & Hussain, S. (2013). Role overload: A cause of diminishing employee retention and productivity. *Middle-East Journal of Scientific Research*, 18(11), 1573-1577.
doi:10.5829/idosi.mejsr.2013.18.11.12457
- Mangioni, V., & McKerchar, M. (2013). Strengthening the validity and reliability of the focus group as a method in tax research. *eJournal of Tax Research*, 11(2), 176-190. Retrieved from <http://www.austlii.edu.au/au/journals/eJTR/2013/10.htm>
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York: John Wiley.
- Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in is research. *Journal of Computer Information System*, 54(1), 11-22. Retrieved from <http://www.iacis.org/jcis/jcis.php>
- Marshall, C., & Rossman, G. (2014). *Designing qualitative research* (6th ed.). Thousand Oaks, CA: Sage.
- Meera, M., & Thampi, S. P. (2014). Effects of job related factors as motivators on performance and satisfaction of employees in information technology firms. *International Interdisciplinary Journal of Scientific Research*, 1(1), 124-135.
Retrieved from www.ijjsr.org
- Memon, M. A., Salleh, R., Baharom, M. N. R., & Harun, H. (2014). Person-organization fit and turnover intention: The mediating role of employee engagement. *Global Business and Management Research*, 6(3), 205-209. Retrieved from <http://www.gbmr.ioksp.com/>

- Menon, P., & Thingujam, N. S. (2012). Recession and job satisfaction of Indian information technology professionals. *Journal of Indian Business Research, 4*(4) 269–285. doi:10.1108/17554191211274785
- Metcalf, L., Hess, J. S., Danes, J. E., & Singh, J. (2012). A mixed- method approach for designing market-driven packaging. *Qualitative Market Research: An international Journal, 15*(3), 268-289. doi:10.1108/13522751211231987
- Mohlala, J., Goldman, G. A., & Goosen, X. (2012). Employee retention within the information technology division of a South African bank: Original research. *SA Journal of Human Resource Management, 10*(2), 1-11. doi:10.4102/sajhrm.v10i2.438
- Mohr, D. C., Young, G. J., & Burgess Jr., J. F. (2012). Employee turnover and operational performance: The moderating effect of group-oriented organizational culture. *Human Resource Management Journal, 22*(2), 216-233. doi:10.1111/j.1748-8583.2010.00159.x
- Morley, J. (2012). Five ways of doing qualitative analysis: Phenomenological psychology, grounded theory, discourse analysis, narrative research, and intuitive inquiry. *Journal of Phenomenological Psychology, 43*, 131–148. doi:10.1163/156916212X632989
- Morse, J. M., & Cheek, J. (2014). Making room for qualitatively driven mixed method research. *Qualitative Health Research, 24*(1), 3-5. doi:10.1177/1049732313513656
- Moss, J. M., Gibson, D. M., & Dollarhide, C. T. (2014). Professional identity

development: A grounded theory of transformational tasks of counselors. *Journal of Counseling and Development*, 92, 3-12. doi:10.1002/j.1556-6676.2014.00124.x

- Nakano, D., Moraes, R. D. O., & Ressa, A. P. P. D. M. (2013). Does knowledge management systems moderate turnover effects? A study on software development teams. *International Journal of Knowledge Management (IJKM)*, 9(4), 1-16. <http://www.igi-global.com/journal/international-journal-knowledge-management-ijkm/1083>
- Nasiripour, A., Afshar Kazemi, M., & Izadi, A. (2012). Effect of different HRM policies on potential of employee productivity. *Research Journal of Recent Sciences*, 1(6), 45-54. Retrieved from <http://www.isca.in/rjrs/Introduction.php>
- Nawaz, N., Jahanian, A., & Tehreem, S. (2012). Determinants of employee retention in Pakistan International Airlines (PIA). *European Journal of Business and Management*, 4(7), 45-53. Retrieved from <http://iiste.org/Journals/index.php/EJBM>
- Newington, L., & Metcalfe, A. (2014). Factors influencing recruitment to research: Qualitative study of the experiences and perceptions of research terms. *BMC Medical Research Methodology*, 14(1), 1-20. doi:10.1186/1471-2288-14-10
- Newman, D. A., Joseph, D. L., & Feitosa, J. (2015). External validity and multi-organization samples: Levels-of-analysis implications of crowdsourcing and college student samples. *Industrial and Organizational Psychology*, 8(02), 214-220. doi:10.1017/iop.2015.28

- Ng'ethe, J. M., Namusonge, G. S., & Iravo, M. A. (2012). Influence of leadership style on academic staff retention in public universities in Kenya. *International Journal of Business and Social Science*, 3(21), 297-303. Retrieved from www.ijbssnet.com
- Nguyen, N. G. (2014). Some factors affecting turnover intention of information technology employees in Vietnam. *Engineering Management Research*, 3(1), 89-98. doi:10.5539/emr.v3n1p89
- Nouri, H., & Parker, R. J. (2013). Career growth opportunities and employee turnover intentions in public accounting firms. *The British Accounting Review*, 45(2), 138-148. doi:10.1016/j.bar.2013.03.002
- Nwokocha, I., & Iheriohanma, E. (2012). Emerging trends in employee retention strategies in a globalizing economy: Nigeria in focus. *Asian Social Science*, 8(10), 198-207. doi:10.5539/ass.v8n10p198
- Ody-Brasier, A., & Vermeulen, F. (2014). The price you pay: Price-setting as a response to norm violations in the market for champagne grapes. *Administrative Science Quarterly*, 59(1), 109-144. doi:10.1177/0001839214523002
- O'Halloran, P. L. (2012). Performance pay and employee turnover. *Journal of Economic Studies*, 39(6), 653-674. doi:10.1108/01443581211274601
- O'Keefe, J. O., Buytaert, W., Mijic, A., Brozovic, N., & Sinha, R. (2015). The use of semi-structured interviews for the characterization of farmer irrigation practices. *Hydrology and Earth System Sciences Discussions*, 12, 8221-8246. doi:10.5194/hessd-12-8221-2015

- Ongori, H., & Agolla, J. E. (2012). Rhetoric and reality of disabilities management in organizations: A strategy to manage employee turnover. *International Journal of Learning and Development*, 2(1), 509-519. doi:10.5296/ijld.v2i1.1 473
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2013). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration of Policy in Mental Health and Mental Health Service Research*, 1-2. doi:10.1007/s10488-013-0528-y
- Pandu, A., & Hussain, M. G. (2013) Job attitudes and attrition: An empirical study of IT and ITeS employees in India. *Journal of Strategic Human Resource Management*, 1(3), 1-9. Retrieved from <http://www.manuscript.publishingindia.com/index.php/JSHRM/index>
- Pardasani, M., Goldkind, L., Heyman, J. C., & Cross-Denny, B. (2012). How much does distance in distance education matter? Our students speak. *Social Work Education*, 31(4), 406-421. doi:10.1080/02615479.2011.573547
- Patel, P. C., & Conklin, B. (2012). Perceived labor productivity in small firms: The effects of high-performance work systems and group culture through employee retention. *Entrepreneurship Theory and Practice*, 36(2), 205-235. doi:10.1111/j.1540-6520.2010.00404.x
- Patil, Y. V., & Sharma, D. S. (2014). An analytical study of role of compensation and exit interview on employee retention in plastic manufacturing industry in Jalgaon district. *International Journal of Human Resource Management*, 1(1), 6-10. Retrieved from <http://www.tandfonline.com/toc/rijh20/current>

- Pee, L. G., Kankanhalli, A., Tan, G. W., & Tham, G. Z. (2012). Mitigating the impact of member turnover in information systems development projects. *IEEE Transactions on Engineering Management*, *61*(4), 1-15.
doi:10.1109/TEM.2014.2332339
- Petty, N. J., Thomson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 2: Introducing qualitative research methodologies and methods. *Manual Therapy*, *17*(5), 378-384. doi:10.1016/j.math.2012.03.004
- Pezalla, A. E., Pettigrew, J., & Miller-Day, M. (2012). Researching the researcher-as-instrument: An exercise in interviewer self-reflexivity. *Qualitative Research*, *12*(2), 165–185. doi:10.1177/1468794111422107
- Pietersen, C., & Oni, O. (2014). Employee turnover in a local government department. *Mediterranean Journal of Social Sciences*, *5*(2), 141-154.
doi:10.5901/mjss.2014.v5n2p141
- Rahman, W., & Nas, Z. (2013). Employee development and turnover intention: Theory validation. *European Journal of Training and Development*, *37*(6), 564-579.
doi:10.1108/EJTD-May-2012-0015
- Rainayee, R. A. (2013). Employee turnover intentions: Job stress or perceived alternative external opportunities. *International Journal of Business and Management*, *5*(1), 48-59. Retrieved from <http://ijibm.elitehall.com/>
- Raman, R., Bharathi, S. V., Sessa, V., & Joseph, S. (2013). Use of structural equation modeling to empirically study the turnover intentions of information technology

- professionals in Pune City. *Indian Journal of Science and Technology*, 6(12), 5612-5624. Retrieved from www.indjst.org
- Ramos, E., & Joia, L. A. (2013). An investigation into turn-away among information technology professionals in Brazil. *The Journal of High Technology Management Research*, 24(1), 30-41. doi:10.1016/j.hitech.2013.02.005
- Randall, W. S., & Mello, J. S. (2012). Grounded theory: An inductive method for supply chain research. *International Journal of Physical Distribution & Logistics Management*, 42(8/9), 863-860. doi:10.1108/09600031211269794
- Rao, J. V., & Chandraiah, K. (2012). Occupational stress, mental health and coping among information technology professionals. *Indian Journal of Occupational and Environmental Medicine*, 16(1), 22-26. doi:10.4103/0019-5278.99686
- Rennie, D. L. (2012). Qualitative research as methodical hermeneutics. *Psychological Methods*, 17(3), 385-398. doi:10.1037/a0029250
- Rizwan, M., Jaskani, J. H., Ameen, H., Hussain, S., Farooq, R. U., & Omair, M. (2013). Antecedents of employee satisfaction and its impact on job turnover. *International Journal of Management Sciences and Business Research*, 2(1), 55-64. Retrieved from www.ijmsbr.com
- Robinson, O. C. (2014). Sampling in interview- based qualitative research: A theoretical and practical guide. *Qualitative Research in Psychology*, 11(1), 25-41. doi:10.1080/14780887.2013.801543
- Roy, O., & Pacuit, E. (2013). Substantive assumptions in interaction: A logical perspective. *Synthese*, 190(5), 891-908. doi:10.1007/s11229-012-0191-y

- Royset, J. O. (2013). On sample size control average approximations for solving smooth stochastic programs. *Computational Optimization and Applications*, 55, 265-309. doi:10.1007/s10589-012-9528-1
- Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.
- Ryan, S., & Harden, G. (2014). Job embeddedness of information technology professionals: The effects of gender. *The Journal of Computer Information Systems*, 54(4), 52. Retrieved from <http://iacis.org/jcis/jcis.php>
- Sajjad, A., Ghazanfar, H., & Ramzan, M. (2013). Impact of motivation on employee turnover in telecom sector of Pakistan. *Journal of Business Studies Quarterly*, 5(1), 76-92. Retrieved from <http://jbsq.org>
- Sargeant, J. (2012). Qualitative research part II: Participants, analysis, and quality assurance. *Journal of Graduate Medical Education*, 4(1), 1-3. doi:10.4300/JGME-D-11-00307.1
- Sarwar, A., Hameed, S., & Aftab, H. (2013). Study to explore the impact of personality traits on employee turnover in public and private sector. *Middle-East Journal of Scientific Research*, 16(9), 1249-1254. doi:10.5829/idosi.mejsr.2013.16.09.12027
- Scutt, C., & Hobson, J. (2013). The stories we need: Anthropology, philosophy, narrative and higher education research. *Higher Education Research & Development*, 32(1), 17-29. doi:10.1080/07294360.2012.751088
- Shahabuddin, A. M., Azam, K. G., & Chowdhury, M. S. (2013). The effects of supervisory behavior on IT employees' job satisfaction: An exploratory study.

- European Journal of Business and Management*, 5(16), 1-5. Retrieved from <http://iiste.org/Journals/index.php/EJBM>
- Shahin, N. (2014). Role of employee retention practices in Indian industry: A study of select MNCs in Jamshedpur. *International Journal of Engineering and Management Research*, 4(4), 206-213. Retrieved from <http://www.ijemr.net/>
- Sharafi, T. (2012). The relationship between family-to-work conflict of employee and co-workers' turnover intention. *Management Science Letters*, 2(1), 1-10.
doi:10.5267/j.msl.2011.10.008
- Shih, S. P., Jiang, J. J., Klein, G., & Wang, E. (2013). Job burnout of the information technology worker: Work exhaustion, depersonalization, and personal accomplishment. *Information & Management*, 50(7), 582-589.
doi:10.1016/j.im.2013.08.003
- Shukla, S., & Sinha, A. (2013). Employee turnover in banking sector: Empirical evidence. *IOSR Journal of Humanities and Social Science*, 11(5), 57-61.
Retrieved from <http://www.ijhssnet.com/>
- Simpson, A., Slutskaya, N., Hughes, J., & Simpson, R. (2014). The use of ethnography to explore meaning that refuse collectors attach to their work. *Qualitative Research in Organization and Management: An International Journal*, 9(3), 183-200.
doi:10.1108/QROM-01-2013-1133
- Sirichoti, A., & Wall, W. P. (2013). Optimizing employee productivity and efficiency with custom software. *Stamford Journal*, 5(1), 20-24. Retrieved from <http://journal.stamford.edu/index.php/ajmi>

- Slavich, B., Cappetta, R., & Giangreco, A. (2014). Exploring the link between human resource practices and turnover in multi-brand companies: The role of brand units' images. *European Management Journal*, 32(2), 177-189.
doi:10.1016/j.emj.2013.06.001
- Spell, H. B., Eby, L. T., & Vandenberg, R. J. (2014). Developmental climate: A cross-level analysis of voluntary turnover and job performance. *Journal of Vocational Behavior*, 84 (3), 283-292. doi.10.1016/j.jvb.2014.02.001
- Srivastava, S., & Misra, M. (2014). Developing evaluation matrix for critical success factors in technology forecasting. *Global Business Review*, 15(2), 363-380.
doi:10.1177/0972150914523598
- Stanley, L., Vandenberghe, C., Vandenberg, R., & Bentein, K. (2013). Commitment profiles and employee turnover. *Journal of Vocational Behavior*, 82(3), 176-187.
doi:10.1016/j.jvb.2013.01.011
- Steinberga, L., & Smite, D. (2013). A case study of job satisfaction in an offshore office: Is software engineers' motivation at risk? *Baltic Journal of Modern Computing*, 1(3), 3-4, 186-198. Retrieved from <http://www.bjmc.lu.lv>
- Street, C. T., & Ward, K. W. (2012). Improving validity and reliability in longitudinal case study timelines. *European Journal of Information Systems*, 21(2), 160-175.
doi:10.1057/ejis.2011.53
- Strojilova, P., & Rafferty, P. D. (2013). People strategy: Understanding voluntary turnover in organizations using an illustrative case study. *Advances in Business-Related Scientific Research Journal (ABSRJ)*, 4(2), 99-112. Retrieved from

<http://absrc.org/>

- Szyjka, S. (2012). Understanding research paradigms: Trends in science education research. *Problems of Education in the 21st Century*, 43, 110-43118. Retrieved from http://www.jbse.webinfo.lt/Problems_of_Education.htm
- Terrell, A. R. (2012). Mixed-methods research methodologies. *The Qualitative Report*, 17(1), 254-280. Retrieved from <http://tqr.nova.edu/>
- Tessier, S. (2012). From field notes, to transcripts, to tape recordings: Evolution or combination? *International Journal of Qualitative Methods*, 11, 446-460. Retrieved from <http://ejournals.library.ualberta.ca/index.php/IJQM/>
- Tews, M. J., Michel, J. W., & Ellingson, J. E. (2013). The impact of coworker support on employee turnover in the hospitality industry. *Group & Organization Management*, 38(5), 630-653. doi:10.1177/1059601113503039
- Thakur, P. (2014). A research paper on the effect of employee engagement on job satisfaction in IT sector. *Journal of Business Management & Social Sciences Research*, 3(5), 31-39. Retrieved from <http://www.borjournals.com/a/index.php/jbmssr>
- Thirulogasundaram, V. P., & Kumar, S. S. (2012). The correlation between leadership approach and employees turnover intention in software industry at Bangalore City, India. *International Journal of Innovative Research and Development*, 1(9), 600-615. Retrieved from <http://www.ijird.com>

- Thomas, S. J. (2015). *Exploring strategies for retaining information technology professionals: A case study*: (Doctoral dissertation). Retrieved from ProQuest Digital Dissertations and Theses database. (UMI No. 3681815)
- Tong, C., Tak, W. I. W., & Wong, A. (2013). The impact of knowledge sharing on the relationship between organizational culture and job satisfaction: The perception of information communication and technology (ICT) practitioners in Hong Kong. *International Journal of Human Resource Studies*, 3(1), 9-37.
doi:10.5296/ijhrs.v3i1 .3112
- Trotter II, R. T. (2012). Qualitative research sample design and sample size: Resolving and unresolved issues and inferential imperatives. *Preventive Medicine*, 55(5), 398- 400. doi:10.1016/j.ypmed.2012.07.003
- Tse, H. H., Huang, X., & Lam, W. (2013). Why does transformational leadership matter for employee turnover? A multi-foci social exchange perspective. *The Leadership Quarterly*, 24(5), 763-776. doi:10.1016/j.leaqua.2013.07.005
- Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work*, 11(1), 80-96. doi:10.1177/143325010368316
- Tuzun, I. K., & Kalemci, R. A. (2012). Organizational and supervisory support in relation to employee turnover intentions. *Journal of Managerial Psychology*, 27(5), 518-534. doi:10.1108/02683941211235418
- Uluyol, O., & Akçi, Y. (2014). A research on perceptions of manufacturing firms about marketing and financial problems with the method qualitative analysis: Adiyaman

case. *International Journal of Business and Social Science*, 5(4), 224-233.

Retrieved from <http://ijbssnet.com/>

U.S. Department of Health and Human Services. (1979). *The Belmont Report*. Retrieved from <http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html>

U.S. Department of Labor. (2015). *Bureau of Labor Statistics, Occupational Outlook Handbook, 2014-15 Edition*. Retrieved from <http://www.bls.gov/ooh/computer-and-information-technology/home.htm>

Van der Aa, Z., Bloemer, J., & Henseler, J. (2012). Reducing employee turnover through customer contact center job quality. *The International Journal of Human Resource Management*, 23(18), 3925-3941. doi:10.1080/09585192.2012.669782

Vijayakumar, J. (2012). The retention strategies of employees of IT industries. *International Journal of Research in Social Sciences*, 2(4), 98-131. Retrieved from <http://www.ijmra.us>

Walker, J. L. (2012). The use of saturation in qualitative research. *Canadian Journal of Cardiovascular Nursing*, 22(2), 37-46. Retrieved from <http://www.ccn.ca>

Walsh, K. (2013). When I say...triangulation. *Medical Education*, 47(9), 866. doi:10.1111/medu.12241

Wisdom, J. P., Cavaleri, M. A., Onwuegbuzie, A. J., & Green, C. A. (2012). Methodological reporting in qualitative, quantitative, and mixed methods health services research articles. *Health Services Research*, 47(2), 721-745. doi:10.1111/j.1475-6773.2011.01344.x

- Woźniak, J., & Lubińska, K. (2013). Turnover models for IT specialists: Different markets create different patterns. *International Journal of Advanced Business and Management Research (IJABMR)*, 1(1), 72-83. Retrieved from <http://www.grsci-techpress.org/index.php/IJABMR/index>
- Yang, J. T., Wan, C. S., & Fu, Y. J. (2012). Qualitative examination of employee turnover and retention strategies in international tourist hotels in Taiwan. *International Journal of Hospitality Management*, 31(3), 837-848.
doi:10.1016/ijhm.2011.10.001
- Yin, R. K. (2013). *Validity and generalization in future case study evaluations. Evaluation*, 19(3), 321-332. doi:10.1177/1356389013497081
- Yin, R. K. (2014). *Case study research: Designs and methods* (5th ed.). Thousand Oaks, CA: Sage.
- Yu, Y., Benlian, A., & Hess, T. (2012, January). An empirical study of volunteer members' perceived turnover in open source software projects. *In System Science (HICSS), 2012 45th Hawaii International Conference on* (pp. 3396-3405). IEEE.
doi:10.1109/HICSS.2012.97
- Zarif, T. (2012). Grounded theory method: An overview. *Interdisciplinary Journal of Contemporary Research in Business*, 4(5), 969-979. Retrieved from <http://ijcrb.webs.com>
- Zhang, X., Ryan, S. D., Prybutok, V. R., & Kappelman, L. (2012). Perceived obsolescence, organizational embeddedness, and turnover of IT workers: An

empirical study. *ACM SIGMIS Database*, 43(4), 12-32.

doi:10.1145/2398834.2398837

Zhou, L., & Nunes, M. B. (2013). Doing qualitative research in Chinese contexts:

Lessons learned from conducting interviews in a Chinese healthcare environment.

Library Hi Tech, 31(3), 419-434. doi:10.1108/LHT-11-2012-0104

Appendix A: Introductory Letter for Executives

Dear Executive,

My name is Lawrence R. Arnold and I am a doctoral candidate at Walden University. I am pursuing a Doctor of Business Administration (DBA) degree with a specialization in Leadership. I am conducting a qualitative, exploratory, multiple case study titled: *Strategies for Reducing High Turnover Rates Among IT Professionals*. The purpose of this study is to determine what strategies business leaders need to retain IT personnel. This study may affect business practice by helping business leaders to develop strategies that may reduce direct and indirect cost associated with turnover.

As part of this study, I am requesting authorization from you to conduct semistructured interviews with open-ended questions with your IT managers for the purpose of data collection. Interviews will be conducted in person or via telephone. I understand that employees' participation will be voluntary and at their own discretion.

Here are some sample questions that I will ask during the semi-structured interview:

1. What do you think are the reasons why IT professionals leave the organization?
2. What retention strategies do you use to retain IT professionals?
3. How can you use your experiences and knowledge to retain IT professionals within the organization?

If you grant me permission to conduct the study using your organization, please review, sign and email or scan the Letter of Cooperation to me. Should you have any questions or concerns, please contact me at (757) xxx-xxxx.

Sincerely,

Lawrence R. Arnold

Appendix B: Consent to Use and Reproduce

Lawrence Arnold [email address redacted]> Mon, Nov 2, 2015 at 3:33 PM

To: [email address redacted]

Good day Dr. Thomas

As discussed, I am pursuing a Doctor of Business Administration degree at Walden University. My research is similar to your doctoral study entitled "Strategies to Reduce Turnover Rate Among IT Professionals." I am respectfully requesting your permission to use and reproduce in my study some or the entire interviewing instrument (or a variation of the instrument) from your study:

I am requesting to use and reproduce this instrument under the following conditions:

I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities.

I will send a copy of my doctoral study that uses this instrument promptly to your attention upon final approval.

If these are acceptable terms and conditions, please indicate so by emailing a written approval by replying to this email and given your written consent of use.

Sincerely,

Lawrence Arnold

Doctoral Candidate Walden University

Shannon Thomas <shannonjthomas@xxxxxx.com> Mon, Nov 2, 2015 at 6:54 PM

To: Lawrence Arnold <lawrence.arnold@xxxxxx.edu>

Lawrence,

Thank you so much for reaching out to me. It would be a privilege to extend permission for you to produce and reproduce my instrument for your research project. "Strategies to Reduce Turnover Rate Among IT Professionals." based to the term you described in the consent request. Blessing in your research efforts.

Appendix C: Informed Consent for Participants over 18 Years of Age

You are invited to take part in a research study of the strategies business leaders require to retain IT professionals. You were chosen for the study because you are: (a) serving as a senior IT professional with hiring authority, (b) serving in roles such as chief information officer (CIO) or chief technology officer (CTO), vice president or senior vice president of information technology, IT director, information security manager, network manager, and IT project manager, and (c) working in Houston, Texas. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Lawrence Arnold, who is a doctoral student at Walden University.

Background information:

The purpose of this study is to explore the strategies business leaders require to retain IT professionals. This study may fill gaps in the understanding and effective practice of business by exploring strategies for reducing turnover rates among IT professionals

Procedures:

If you agree to be in this study, you will be asked to:

- Participate in a semistructured, audiotaped interview with the researcher regarding strategies business leaders require to retain IT professionals. You will be asked eight questions and the duration of the interview will be thirty to sixty minutes.
- Member check the interview data, which is ensuring your opinions about the initial findings and interpretation is accurate.

Here are some sample questions in which you will be asked by the researcher during the semi-structured interview:

1. What do you think are the reasons why IT professionals leave the organization?
2. What retention strategies do you use to retain IT professionals?
3. How can you use your experiences and knowledge to retain IT professionals within the organization?

Voluntary nature of the study:

This study is voluntary. Everyone will respect your decision as to whether or not you choose to be in the study. No one will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and benefits of being in the study:

The time commitment related to this study is that you will be required to complete the 30 to 60 minute interview during or after normal work hours. You will be given a copy of the results of this study for your personal information. There are no other risks related to this study. Your participation in this study may contribute to social change by adding knowledge to the overall study of turnover. In addition, your participation may help business leaders develop strategies to reduce high turnover rates among IT professionals.

Compensation:

No forms of compensation (i.e. payments, thank you gifts, reimbursements, etc.) will be offered. Participants will receive an electronic copy of the final report

Confidentiality:

Any information you provide will be kept confidential. The researcher will not use or share your personal information for any purposes outside of this research project. Also, the researcher will not include your name, the name of your organization, or any information that could identify you or your organization in the study reports. All electronic data collected will be kept secured on a removable digital storage device and password protected, and all non-electronic data collected will be stored in a secured file cabinet. In each case, both methods of data collection will be stored for a minimum period of at least 5 years, as required by the university.

Contacts and questions:

You may contact the researcher, Lawrence Arnold, 757-xxx-xxxx or Lawrence.Arnold@xxxxxx.edu. You may also contact the researcher's faculty mentor and doctoral study chair, Dr. Gregory Uche, at xxx-xxx-xxxx or [email address redacted]. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is [redacted]. Walden University's approval number for this study is **(IRB approval # 02-29-16-0185281)** and it expires on **February 28, 2017.**

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Printed Name of Participants:

Date of consent:

Participant's Signature (Written or Electronic*)

Researcher's Signature (Written or Electronic*)

The Uniform Electronic Transactions Act regulates electronic signatures. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.