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**An Exploration of
Retention Practices in the IT Industry**

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A Thesis
In
the John Molson School of Business

Presented in Partial Fulfilment of the Requirements
for the Degree of Master of Science in Administration at
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ABSTRACT

An Exploration of Retention Practices in the IT Industry

Julia Naggiar

Present day socioeconomic factors have exacerbated the need for superior organizational retention strategies. The knowledge-based economy, the shortage of skilled labour, and shifting work force demographics have made retention issues particularly significant in the IT industry. This exploratory study examined the application of a best practice retention model in IT organizations. The model consists of the six factors most cited in the literature to affect turnover, namely, orientation, training, career development, motivation, compensation, and feedback/evaluation. Three main aspects of retention were explored. First, the extent of application of the six best practices in IT organizations was examined. Second, the perspective of the HR manager was examined to gain insight into both the types of retention strategies being implemented, and the challenges inherent in implementing the best practices. Third, the perspective of the IT professional was examined to gain information regarding which retention strategies most affected commitment.

It was found that orientation, career development, non-financial compensation, and feedback confer competitive advantage to IT organizations in terms of retention, while training, intrinsic motivational strategies, and financial compensation are necessary practices to avoid dissatisfaction, but do not encourage retention. A contingency model is proposed, which takes into account the relevance of labour market conditions, demographic factors, and organizational size, structure, and culture to the design of retention strategies.

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This thesis is dedicated to:

*The memory of my mother, who wanted so much for this dream to come true for me;
My father, for his kindness and generosity in helping me see this through;
John, for being the best friend I have ever known, and an even better counsellor. I am
looking forward to all our future adventures....
My grandparents, Agnes and George, for teaching me to read.*

This degree is as much all of yours as it is mine.

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An Exploration of the Organizational Application of Retention Best Practices in the IT Industry

Employee turnover has always been a critical issue in the field of human resource management. However, present day socioeconomic factors have exacerbated the need for superior organizational retention strategies. In the coming years, employee retention strategies will be tightly linked with organizational survival (Harris, 1999). The emphasis on employee retention strategies and their link to organizational productivity and profit has arisen due to the emergence of the knowledge-based economy, wherein an organization's human resources are becoming critical corporate assets that can be tied directly to organizational financial outcomes.

In the past, organizations analysed profit based on the contribution of their employees as a whole on manufacturing processes and products. Today, however, the rise of the service sector has placed increased emphasis on individual-level contributions to organizational outcomes. Now, it has become possible to calculate the direct effect of the contribution of each knowledge worker to various organizational outcomes, such as productivity, innovation, and profit (Zigarelli, 1996). To understand the increased need for comprehensive organizational retention strategies, one must view emergent socioeconomic trends from the perspectives of both the organization and the individual employee.

Turnover from the Organization's Perspective

With regard to the organizational perspective, two factors have led to the increased need for the development of comprehensive retention strategies. First, the advent of the twenty-first century has occurred during a period of severe shortage of skilled labour which is forecasted to continue throughout the next century (Judy, 2000). Organizations are not merely facing a quantitative shortage of employees, but rather a shortage of employees with the necessary knowledge, skills, and abilities to adequately perform in an increasingly technologically oriented marketplace. Specifically, "what's most serious for North America's economic and social future is the qualitative deficiency of the workforce-the infamous 'skills gap'"(Judy, 2000, p. 22). In other words, too many members of the current workforce, and too many young people entering the workforce, lack the attitudes, knowledge and skills to properly fill the jobs that the high-tech economy is offering in rapidly growing numbers (Judy, 2000). In addition, technological innovation is occurring so rapidly that the demand for skilled professionals continues to increase.

Furthermore, increasing numbers of individuals from the Baby Boomer generation are currently retiring, thus adding to the labour shortage. This trend is expected to continue with one in five Americans being senior citizens by the year 2030 as compared with one in eight in the mid-1990s (Judy, 2000, p.26). The growing number of retirees will contribute to slower growth in the labour force, and further diminish the supply of skilled labour. Because organizations are facing such a shortage of skilled professionals in the labour market, they must focus on developing retention strategies geared toward ensuring the stability of their internal labour supply.

Also, current labour market conditions have resulted in a vast amount of career opportunities for skilled professionals. Today's organizations are in direct competition with one another to obtain the skilled professionals who have become a scarce commodity in the marketplace due to prevailing labour shortages. This economic aspect makes employee retention one of the most important issues in human resource management today. To become and remain effective competitors in the area of employee loyalty, organizations must have extensive retention strategies in place (Half, 1993).

Second, from the organizational perspective, the sheer cost of high turnover rates to today's organizations necessitates comprehensive retention tactics. It is said that replacement costs for skilled professionals lost to an organization through voluntary turnover can be extraordinarily high. As a matter of fact, some human resource executives estimate that when all factors are considered "not only the headhunter's fee but also the defector's lost leads and contacts, the new employee's depressed productivity while he's learning, and the time co-workers spend guiding him-replacement costs can be as much as 150% of the departing person's salary" (Branch, 1998, p.247).

In addition, when an organization's voluntary turnover rate is high, the organization can fall prey to a spiralling turnover rate caused by low employee morale. In many cases, after a colleague leaves an organization, those who remain behind reportedly experience a sense of personal loss (Sheehan, 1995). It has been argued that the dissatisfaction caused by a colleague's departure combined with the supposition that the colleague has departed for a better alternative can lead to lower morale, lower job satisfaction, and higher turnover rates (Koslowsky, 1987; Mowday, Porter, & Steers, 1982; Sheehan, 1991). Thus, organizations must

have retention strategies in place geared toward the avoidance of potential spiralling turnover rates. Therefore, from an organizational perspective, the socioeconomic trends that have caused the emergent focus on employee retention tactics are the shortage of skilled labour, the vast number of skilled jobs available in the labour market, and the particularly high cost of turnover to today's organizations. In addition to the organizational perspective, to understand the emerging importance of employee retention strategies, one must also understand the perspective of the employee.

Turnover from the Individual's Perspective

With regard to the individual perspective, four factors have led to the increased need for the development of comprehensive retention strategies. First, as Generation X individuals begin to move into the workforce, organizations must take into account their specific expectations for their work experiences. The term "Generation X" denotes a group of people born between 1961 and 1972 typified by a college education, dissatisfaction with career opportunities, and pessimism. Generation X employees were brought up during periods of organizational upheaval and downsizing. The effect of corporate downsizing on their parents' generation has led Generation Xers to believe that organizations are not loyal to their employees (Caudron, 1997; Tulgan, 1995). Generation Xers entered the work force with a "frame of reference that did not include job security, pensions, or a traditional career model"(Jurkiewicz & Brown, 1998). So, Generation Xers believe that they must be the architects of their own careers, using their sense of ambition to "build a variety of skills and enhance their marketability"(Lankard, 1995, p.290). This type of individualism means that

organizations must work hard to prove their loyalty to Generation X employees. This is quite a transition for most organizations, since employees have traditionally been expected to prove their loyalty to the organization.

At the same time, the Baby Boomer generation (parents of Generation Xers) is beginning to move out of the work force. Many of these individuals have moved up the corporate ladder, and are enjoying the benefits of having reached the pinnacle of their careers. Although still significant contributors to the work force, Boomers are beginning to slow down their work pace and contemplate the idea of retirement. With fewer household dependents than in the past, Boomers are not in need of excessive compensation for their efforts. As a matter of fact, it is said that Boomers are more concerned with their quality of life than with money (Jurkiewicz & Brown, 1998; Robbins, 1998; Smith & Clurman, 1997). Thus, organizations must design and implement retention practices that induce these employees to choose work over retirement.

Secondly, from the individual perspective, the globalization of the present economy has led to individual expectations of comprehensive organizational retention strategies (Hui, 1988; Kirschenbaum & Mano-Negrin, 1999; Lee et al., 1992). Economic globalization allows individuals the capability of crossing borders to take advantage of career opportunities in other areas. This increases the already high number of job opportunities in existence for skilled professionals. For individuals to remain in organizations, they must feel that their current work situation is better than any other alternatives elsewhere, so, organizational retention strategies are of critical importance.

The third factor affecting the salience of organizational retention strategies to individuals involves organizational competition for scarce human resources. It has already been mentioned that due to the shortage of skilled professionals, those employees who do possess the necessary knowledge, skills, and abilities to become competent organizational performers are facing a wealth of career opportunities. Higher levels of more aggressive competition between organizations for skilled talent has resulted in inflated salary and benefits packages for skilled professionals. Skilled employees are aware of their leverage in the labour market and, as a result, have come to expect superior organizational retention policies to be in effect in the organizations in which they choose to work.

The final factor of note with regard to the individual perspective concerning organizational retention strategies is the emergent interest in work-life balance. The decade of the 1990s marked the birth of the individual pursuit of a balance between work objectives and personal objectives, which is expected to continue (Branch, 1998; Comeau-Kirschner & Wah, 1999; Jurkiewicz & Brown, 1998). Individuals now aspire to maximization of work, family, and community objectives, and employees seek to maintain their affiliation with organizations that protect these aspirations. It is believed that organizations that do not react to the trend toward work-life balance will risk falling prey to significant staff losses (Ulrich, 1997). Thus, from an individual perspective, the socioeconomic trends that have caused the emergent focus on employee retention tactics are the current demographic trends in the work force with respect to age cohort, the globalization of the present economy, hyper-competition between organizations for scarce skilled human capital, and the emergent social trend of work-life balance.

It has been demonstrated that retention issues are crucial to the field of human resource management in general. However, it must be noted that retention issues are particularly critical and challenging for today's information technology (IT) organizations. IT organizations are experiencing higher than average turnover rates, as well as a shortage of skilled labour that has increased organizational competition for human resources, and has resulted in inflated incentive plans.

Turnover in Information Technology Organizations

Essentially, there are five factors influencing the need for comprehensive retention strategies in IT organizations. The first factor indicating the importance of organizational retention strategies for IT firms concerns the *turnover rates* within these types of organizations. According to the most recent available statistics, within the technology industry as a whole, the average length of employment is 2.7-3 years (Statistics Canada, 1999). In addition, "annual turnover rates of 30-40% are not uncommon" (Kinsey-Goman, 2000, p.114) in the IT sector. As has been previously mentioned, excessive turnover is costly to organizations and can potentially affect organizational survival in the long run. Therefore, technology organizations in particular must pay careful attention to retention strategies to ensure control over voluntary turnover rates.

The second factor which makes retention strategies crucial for technology organizations is their vulnerability to *shifting demographics*. The majority of the IT workforce is made up of Generation X individuals. Since the IT industry is characterized by a younger workforce demographic, organizations that wish to remain competitive must reevaluate the

effectiveness of their current retention strategies to see if they are still useful for younger employees. Many technology firms developed their retention strategies during a period of high involvement of Baby Boomers in the technology economy, and have not invested much time in reevaluating those strategies for the transformation to the new knowledge economy (Davenport, 1999, p.89). The retention strategies prevalent during the period between 1950 and the early 1980s, which were designed to target the loyalty of the Baby Boomer professionals, may not be suitable to target the loyalty of Generation X professionals. Evaluation and planning will be necessary to determine whether or not existing IT organizational retention strategies are effective, and if they are not, the types of retention tactics that will allow IT firms to obtain a competitive edge in the arena of human capital today.

The third factor affecting the salience of retention strategies to IT organizations is the advent of the *knowledge economy*. To survive in the new economic arena, researchers have stated that organizations will have to successfully develop both social capital and human capital (Ford, 1999; Leana & Van Buren, 1999; Starbuck, 1992). Social capital is defined as a resource reflecting the character of social relations within an organization. It is realized through members' levels of collective goal orientation and shared trust, which create value by facilitating successful collective action (Leana & Van Buren, 1999). Social capital comprises an intricate web of relationships, norms, resource exchange, values, obligations, and information channels (Ford, 1999). To succeed in the knowledge economy, organizations must develop and perfect social capital so that they may exist as networks of working relationships whose members are free to associate, collaborate, and learn from one another and respond to

a changing market. The development of social capital is an asset that benefits both the organization and its employees. For example, employee skills and responsibilities are enhanced through social capital development, which can lead to lower rates of turnover. Also, increased productivity and creativity brought about by collaboration can result in enhanced firm performance.

An essential part of developing social capital is the realization that human assets, or human capital, must be valued. Whereas social capital development refers to the organizational climate and culture, human capital refers to the employees of the organization, or “knowledge workers, who carry within them the means of production for today’s organization, whereas previously the means of production were the organization’s tangible assets”(Dess & Picken, 2000, pp. 28). To succeed in today’s competitive environment, organizations must have a comprehensive approach to optimizing human capital and reducing turnover (DiFrancesco & Berman, 2000; Green, 1999; Greenspan, 2000; Hitt, 2000; Zwell & Ressler, 2000). After all, according to Peter Drucker (2000), the foundation of an organization is not money or capital or technology-it is knowledge and education-human capital, and by 2005, knowledge workers will be the single largest group in the labour force. So, people should not be viewed as costs, or factors of production, but as investors in a business, paying in human capital and expecting a return on their investment (Davenport, 1999; Dzinkowsky, 2000). To develop an organization’s human capital, employees must be given incentives to remain contributors to the organization. Therefore, to develop human capital, organizations must also develop retention strategies geared toward decreasing turnover.

The new economy has been previously discussed in terms of its effect on organizations as a whole, but this economic issue is particularly relevant to IT firms. Technology workers form the backbone of the organizations in which they work. Knowledge creation and innovation are the focal points of organizational survival in the IT industry. Since technology workers possess the knowledge necessary to service existing organizational products, and since that knowledge can be used to create the type of technological innovation necessary to give IT organizations the competitive edge they need to survive, it can be inferred that technology professionals are quite literally some of the most important assets of the organizations in which they work. Therefore, retaining these knowledge workers must be an important organizational objective.

The fourth environmental factor influencing the importance of retention strategies to the IT industry concerns the '*skills gap*'. It has been demonstrated that there is a shortage of skilled labour available in the marketplace. This is inherent in the IT sector where technological advancements are occurring so rapidly that the educational sector cannot keep up. In many cases, university graduates enter the labour market only to find that their skills are outdated. Furthermore, IT professionals who are already employed "feel little compunction about jumping ship for a better offer"(Joinson, 1999, p. 87) and taking their knowledge with them. The constant risk of employee poaching due to high organizational competition for scarce human resources means that IT organizations must continuously readapt their retention strategies to ensure their marketability to IT professionals, who are facing a period of abundant job opportunities. Through continual evaluation of retention practices, both quantitatively, in terms of monitoring turnover rates, and qualitatively, in terms of ascertaining employee needs

and preferences with regard to retention strategy, IT organizations will minimize the risk of paying the price of losing their staff to organizational competitors.

The importance of superior retention policies to IT firms does not only involve the monetary cost of high turnover rates. In addition to visible, or monetary organizational costs, turnover also has invisible, or non-monetary costs. These *non-monetary costs* are the fifth environmental factor influencing the importance of retention strategies to the IT industry. For instance, high turnover rates can lead to lower employee morale which may, in turn, lead to a phenomenon termed “work force haemorrhage”(Kinsey-Goman, 2000, p.116). Workforce haemorrhage occurs when remaining employees choose to leave the organization rather than continue working under poor conditions. Often, many employees quit in a short time span, leaving the organization in a perilous state, struggling to find replacements for those who have left, and dealing with drastically low levels of productivity and profit. In the IT industry, where turnover rates are unusually high due to the wealth of available job opportunities for IT professionals, IT organizations are particularly vulnerable to workforce haemorrhage. High turnover rates lead to lower employee morale, which in turn, leads to more turnover creating a vicious cycle which can directly affect organizational survival. IT organizations seeking to avoid the potentially treacherous effect of invisible turnover costs must continuously develop their retention strategies.

In sum, high turnover rates and their antecedent visible and invisible costs, a shift in work force demographics, and an environment of high organizational competition for scarce and critical human assets creates the need for IT organizations to take notice of employee retention issues. The issue of employee retention has been afforded much attention in both

academic and practitioner-oriented literature. A literature review will now be presented with the objective of defining the main research contributions to the topic of employee retention, and of outlining a best practice model for IT organizations aspiring to achieve outstanding retention strategies.

The Evolution of Turnover Research

Turnover is one of the most persistent issues in human resource management. As such, over the years, employee turnover has received much attention in organizational science research (Lee & Mitchell, 1994). The literature on employee turnover can be viewed in terms of a three-step evolutionary process. The first period in employee turnover research involved a focus on the effect of organizational situations on turnover. The second period of turnover research involved a focus on the effect of specific job characteristics on turnover. The third and present period of employee turnover research involves a focus on bundles of human resource management practices and the effect of best-practice models of organizational retention on employee turnover.

First Research Period: A Focus on the Effects of Organizational Situations

The first period in the extensive history of employee turnover research began with the work of Brayfield & Crockett (1955), who studied the connection between job dissatisfaction and turnover. Their initial study was the first of three studies to focus on the relationship between specific organizational situations and the individual outcome of employee turnover.

Following their research, March & Simon (1958), published their pioneering work concerning the employee turnover process. March & Simon (1958) considered the relationship between employee attitudes and organizational withdrawal behaviour. Their focus was on the desirability and/or opportunity precipitating the severance of organizational attachment. These researchers studied the links between job attitudes and turnover, and explored how job dissatisfaction leads to decreasing organizational commitment, which inevitably leads to turnover. They argued that voluntary employee departure results from a decision to participate, which was theorized to derive from two subdecisions about the perceived ease and desirability of movement. Over time, the constructs of opportunity and desirability have evolved into the current job satisfaction and job alternatives variables. Specifically, it has been noted that over time, “the perceived ease of movement has evolved to mean perceived job alternatives, and the perceived desirability of movement has evolved to mean job satisfaction”(Mitchell, 1996, p.6). In addition, the organizational participation construct has evolved into the more recent concept of organizational commitment.

In 1973, Porter & Steers authored another pioneering work in an effort to connect organizational situations to the employee turnover process. Porter & Steers (1973) supported the idea that job satisfaction does lead to increased organizational participation. They also directed attention to the importance of the emerging “met expectations” hypothesis (Bottger, 1990; Mowday et al., 1982; Muchinsky & Tuttle, 1979; Pearson, 1995). Essentially, Porter & Steers (1973) were the first to connect the idea of job expectations and job satisfaction to the turnover process when they proposed that employees have various expectations concerning their work experiences that, when unfulfilled, lead to job dissatisfaction and the likely

consequence of turnover.

Second Research Period: A Focus on the Effects of Job Characteristics

The result of the flourish in research endeavours following the introduction of expectancy theory into the model of employee turnover by Porter & Steers (1973) was a crucial research endeavour by Hackman & Oldham (1976). The Job Characteristics Model (JCM), created by Hackman & Oldham (1976) marks the beginning of the second period of employee turnover research, where the focus shifts from studying organizational situations as a whole, to analysing the effects of specific job attributes on employee turnover. Essentially, the JCM posits that five job dimensions (skill, identity, significance, feedback, and autonomy) will bring about three psychological states of responsibility, meaningfulness, and knowledge of results. In turn, the three psychological states are linked to various work outcomes such as productivity, satisfaction, and turnover (Hackman & Oldham, 1976). The JCM was the first theoretical model to argue that specific job characteristics had an effect on an individual's decision to remain within an organization. The conclusion that turnover is caused by the attractiveness of a current job and the availability of alternatives (Hulin et al., 1985; Mobley, 1977; Shaw, 1998) was now well-founded empirically, so researchers began to focus their efforts on determining exactly which factors make a job attractive enough to encourage employee retention.

Basically, the JCM began a theoretical impetus to explore, determine, and explain the antecedents of the voluntary turnover process. As a result, conclusive evidence has been found to further prove that working conditions affect employee turnover. For example, the JCM

stimulated much research interest in the idea and effects of job design (Griffeth, 1985; Gupta & Jenkins, 1991; Tiegs, Tetrick & Fried, 1992). Also, McEvoy & Cascio (1985) studied the effects of job enrichment programs and realistic job previews on employee turnover, and Cotton & Tuttle (1986) authored an influential work continuing the analysis of specific job characteristics on employee turnover decisions. Their meta-analytic work confirmed previous theoretical conclusions regarding traditional organizational variables, such as overall job satisfaction, but also outlined the importance of the effect of employee perceptions generated by job characteristics such as pay on employee turnover decisions.

Much work has been done following the research of Cotton & Tuttle to determine the effect of compensation and benefits on employee turnover decisions. For instance, corporate benefits programs have been found to decrease employee turnover (Gupta & Jenkins, 1980; Powell et al., 1994; Williams & Dreher, 1989). Also, promotion opportunities have been found to be related to employee separation behaviour (Bretz et al., 1994; Vandenberg, & Nelson, 1999). In addition, nonwork values such as location preferences, family responsibilities, and conflict between work and nonwork roles have been demonstrated to be tied to employee turnover intentions (Mobley, 1982). Furthermore, training programs have been shown to decrease organizational turnover rates (Shaw, 1998). In short, conditions in the work setting are the main factors shaping an employee's decision to stay in or leave an organization (Cohen, 1997; Lee & Mowday, 1987; Mowday et al., 1982).

Third Research Period: A Focus on the Effects of “Best Practices”

Analysing particular job characteristics to determine their effect on employee turnover decisions eventually began to give way to a new research thrust that sought to analyse the effect of bundles of human resource management practices on employee turnover. This shift marks the beginning of the third period in turnover research, which has given rise to the best practice models of employee retention in existence today.

The third period in organizational turnover research is founded on the premise of self-interest maximization and tied to organizational culture. Organizations that make tangible investments in their employees through the use of human resource practices that make jobs more attractive to employees will achieve increased levels of employee loyalty, since employees seek to maximize self-interest in terms of work experiences (Tsui et al., 1997). Of course, organizational culture plays a significant role in the type of corporate human resource practices implemented. Since an organization’s cultural values “influence its human resource strategies, including selection and placement policies, promotion and development procedures, and reward systems,” (Sheridan, 1992, p.1037), organizational culture can explain employee turnover decisions. For example, some organizational cultures emphasize teamwork, security, and respect for organization members. These organizational cultures foster loyalty and long-term employee commitment. Other organizational cultures emphasize personal initiative and individual rewards for the accomplishment of firm objectives. These organizations foster entrepreneurship wherein employees do not promise loyalty in return for job security. It is for this reason that it can be argued that variations in employee retention across organizations can be caused by organizational culture (Kerr & Slocum, 1987; Kopelman et al., 1990). Thus, to

enhance employee retention, organizations must create a culture where human resource practices foster the loyalty and commitment of employees.

According to the literature, it is not one human resource practice, but systems or bundles of practices that affect turnover decisions (Arthur, 1994; Delery & Doty, 1996; Huselid, 1995; MacDuffie, 1995). Based on the idea that human resources are critical for organizational productivity and survival, there is now a movement in the literature which claims that human resource management practices affect employee skills and motivation and, consequently, turnover decisions. Presently, researchers have turned their attention toward the potential of bundles of human resource practices to affect employee turnover, and have theorized that it should be possible to identify a system of HR best practices which, if implemented, will result in more effective organizational control of turnover.

Research on turnover determinants has resulted in the development of best-practice models of employee retention which have been found to enhance employee motivation, participation, development, and which consequently decrease turnover (Bailey, 1993; Huselid, 1995). Best-practice models include, among other things, training, orientation programs, compensation and benefits packages and employee development initiatives.

To conclude, the literature on turnover has gone through three critical periods. The first period involved a focus on the effect of broad organizational situations on turnover. The second period of turnover research involved a focus on the effect specific job characteristics had on turnover. The third and present period of employee turnover research involves a focus on bundles of human resource management practices and the effect of best practice models on employee turnover. Now that the main research contributions to the field of organizational

turnover have been described, and the evolution of theoretical constructs in the area has been explained, a synthesis of the literature will be provided with the objective of outlining a best-practice model of employee retention.

Outlining a Best Practice Model for Employee Retention: A Synthesis of Current Research Perspectives

It has been demonstrated that using systems, or bundles, of strategic human resource practices aligned with the needs of employees is associated with increased organizational productivity and financial performance, and decreased rates of employee turnover. The work of Huselid (1995) has been influential in this third period of employee turnover research. Huselid's analysis of the available literature has identified two factors relevant to employee turnover decisions. The first factors related to employee turnover are employee skills and organizational structures. Organizational practices related to the development of employee skills and organizational structures include job design and selection programs, training, quality of work life programs, and communication-enhancing procedures. The second factor related to employee turnover is employee motivation, which comprises best practices designed to recognize and reinforce desired employee behaviours. Organizational practices related to employee motivation are compensation, benefits, and promotion opportunities. Upon closer inspection of the literature, this author has noted that Huselid's two factor approach can be expanded to include six factors, or best practices, for employee retention.

Six Factors

A thorough review of the literature reveals heavy emphasis on both scholarly and practitioner-based research pertaining to seven areas related to employee turnover. The seven factors are: selection, orientation, training, career development, motivation, compensation, and feedback/evaluation. Studies on employee turnover include emphasis on organizational selection procedures because to control turnover rates, organizations must first be certain that they are hiring employees who will fit into the organizational culture, and whose knowledge, skills, and abilities are well-suited for the job they will be expected to perform. A properly implemented selection process can result in decreased turnover rates. However, the goal of this research is to compare the perceptions of IT professionals with those of HR managers. Since the former are not privy to certain parts of the selection process, this author has chosen to narrow the field of focus by eliminating selection from the retention model.

Thus, the retention best practice model being explored in this study includes the six factors of orientation, training, career development, motivation, compensation, and feedback/evaluation. It is proposed that organizations whose HR departments implement retention strategies composed of these six practices, and based on the needs of their employees will have higher levels of employee retention. A discussion of the six best practices and their relationship to employee retention will now be presented, taking into account both scholarly evidence and practitioner-based field work.

Orientation: The orientation process provides newcomers with the information they need about the organization and about their job to become productive performers. Specifically, employee orientation is the formal process in which new employees learn important organizational values and norms, establish working relationships, and learn how to function within their jobs (Harris & Desimone, 1994). The objective of an orientation program is to provide the new employee with a “feeling of self-worth, a sense of belonging, an attitude of pride and confidence in oneself and in the organization, and a desire to succeed”(Cohen, 1988, p. 22).

Typically, organizational orientation programs begin shortly after the hiring process is completed, and contain both general organizational information and job-specific content. General information may include a review of the organization’s mission and values, key policies and procedures, goals and strategy, compensation and benefits, safety and security, and physical facilities. Job-specific content is usually provided by the newcomer’s immediate supervisor, and habitually involves a presentation of departmental daily operations. The result of the job-specific component of orientation is usually a more realistic job expectation for the newcomer. A wide range of media may be used during the orientation process, including lectures, handouts, discussions, videos, and internet presentations. The length of orientation programs may also vary from a few hours to several days, to periodic sessions during the first few months of the newcomer’s arrival.

The relationship between the orientation process and employee retention has been well-documented in the literature (Feldman, 1980; Harris & Desimone, 1994; Ivancevich & Glueck, 1986; Zemke, 1989). Primarily, orientation programs seek to facilitate the newcomer

adjustment process, so that early turnover will not take place soon after high organizational investment in candidate selection.

Unfortunately, there is a lack of empirical research regarding the necessary components of an effective orientation program (Klein & Weaver, 2000). Much research on orientation discusses how programs should be designed and implemented, but does not present data to reinforce heuristic suggestions (Harris & Desimone, 1994). However, despite the lack of empirical research, common guidelines do exist among the available publications regarding orientation design and implementation. For instance, the literature has demonstrated the importance of using realistic job previews during the orientation process.

A realistic job preview is designed to give an employee both positive and negative information about a job. According to Wanous (1980), it is an essential part of the orientation process because it increases newcomer satisfaction, commitment, and retention. Specifically, according to Wanous (1992), the realistic job preview process involves four interrelated aspects. First, the realistic job preview vaccinates against unusually high expectations by permitting newcomers to adjust their expectation level to the realities of the job. Second, it permits self selection early in the entry process when the organization has made only a minimal investment in the newcomer. Employees who select into the organization after a realistic job preview are more likely to be satisfied with the organization (Wanous, 1980), and less likely to quit. Third, the realistic job preview process instills coping skills in newcomers so that they are more prepared to effectively perform their jobs. Fourth, it enhances personal commitment. An employee who selects into the organization after a realistic job preview will develop a personal commitment to his or her choice, and will be more satisfied and more

committed to remaining within the organization in the long term.

According to Wanous (1989), when designing a realistic job preview, four issues relating to content must be taken into account. First, a decision must be made regarding whether to include descriptive or judgmental content in the process. Second, a decision must be made as to whether extensive or intensive content will be included in the realistic job preview. Third, the degree of negative content must be determined. Fourth, the means by which the realistic job preview will be presented must be chosen. Wanous (1989) recommends using content that is judgmental, intensive, moderately negative, and that is presented by other job incumbents.

In addition to the inclusion of a realistic job preview, other content-related factors have been discussed in terms of their contribution to the success of the employee orientation process. For example, Feldman (1988) has found eleven design elements common to successful orientation programs. He stipulates that the content of orientation programs should include both technical and social aspects of the job, that orientation programs should be relaxing and should not try to overload newcomers with information on their first day, and that orientation programs should involve a two-way interaction process between newcomers and managers.

A thorough introduction to organizational life can make all the difference to organizational turnover rates. For example, effective orientation programs strengthen organizational commitment by creating perceptions of a caring, supportive, honest organization (Eisenberger, Fasalo, & Davis-LaMastro, 1990; Meglino & DeNisi, 1987; Schein, 1968) and orientation programs have been shown to reduce long term turnover by providing

enhanced coping skills, which improve satisfaction and organizational commitment (Meglino et al., 1988). As a matter of fact, research has demonstrated that, after an initial turnover period as a result of self-selection, employees who were exposed to orientation programs displayed less intention to quit and more job satisfaction than those who did not take part in an orientation program (Waung, 1995).

The literature from practitioners converges with the scholarly evidence with regard to the definition of orientation program goals. Specifically, the literature from practitioners states that the objectives of corporate orientation programs are "to shape the behaviour of the individual to fit organizational needs, or to effectively channel the energy of a new employee in the right direction" (Mishra & Strait, 1993, p. 19). Orientation may be thought of as a role acquisition process (Brody, 1986) wherein an organization tries to acclimatise individuals to their surroundings by moulding their attitudes, expectations, and values to those of the organizational culture. An effective orientation program enhances the individual's relationship with the organization by providing "the foundation for worker motivation, commitment and productivity" (Kaul, 1989, p.29). In other words, an orientation program shapes a newcomer's first impression of the organization because it is the first demonstration of organizational culture.

Since orientation programs shape newcomers' first impressions, organizations must be sure that they are sending the message that there is a reason to stay because "if employees sense that they are not going to be able to contribute quickly, or that their expectations will not be met in this environment, the seed has already been planted for them to leave the organization" (Mishra & Strait, 1993).

A number of best practices regarding effective orientation content have been outlined in the applied literature. For example, Tyler (1998) cites the importance of timing and personal attention during the orientation process. Gioia (1999) states that the content of orientation programs is critical to their success, and that organizations must take the opportunity during the process to resell themselves by outlining membership benefits and recounting success stories. Also, according to Gioia (1999), organizations should clarify their expectations with respect to newcomers by providing mentors or coaches to help newcomers adjust to the new corporate culture.

Essentially, practitioner-based field work has determined that successful orientation programs have six elements in common (Zemke, 1989). The six elements are:

1. Measurable goals
2. The involvement of line management
3. Methods of dealing with new employees' jitters and/or uncertainties
4. Alignment of employee expectations and the actual responsibilities of the new job
5. The involvement of senior management in the development process and the actual program when possible
6. Having real work available after the orientation process is over

According to the literature from practitioners, employees who have not been adequately oriented to the new work environment lack a sense of loyalty to the organization, and may feel "alienated, alone, sometimes even resentful, and will bolt at the first appropriate moment"(Gioia, 1999, p. 9). As a matter of fact, research has shown that new employees who went through a structured orientation program were 69% more likely to be with the

organization after three years than those who were left to their own devices (Ganzel, 1998).

Training: Training improves the knowledge, skills, and abilities of individuals through programs that use multimedia approaches to enhance learning and transfer (Harris & Desimone, 1994). For example, lectures, interactive discussions, videos, role-play scenarios, and computer-based training are common in today's organizations.

Training has been found to be directly associated with higher productivity and lower employee turnover (Bouillon, 1995/1996; Glance et al., 1997; Lynch & Black, 1998). Early research found that employees who participated in training programs were more likely to achieve success on the job, and were consequently less likely to leave an organization (Ferris & Urban, 1984). More recently, it has been noted that training programs were "most likely in establishments that...had low employee turnover, or had high-performance work systems"(Lynch & Black, 1998, p. 66), and that overall organizational turnover is inversely related to the total value of specific human capital investment in the employee, including training (Becker, 1962; Bouillon et al., 1995/1996).

Generally, there are two broad types of employee training processes in use in organizations. The first type of training program takes place within the organization itself, and can be implemented either by an internal trainer from the organization's HR department, or by an external trainer brought in from outside the organization. The existence of internal training programs is an indication that the organization has determined, usually through the process of a needs analysis, that there is a skills gap within the internal work force that must be corrected. The second type of training program involves organizational subsidy of work-

related education programs outside the organizational framework. This type of external training is implemented because the organization has determined that only a limited number of employees require the training experience, or because the employees themselves are allowed to choose training programs they feel will help them to become better performers.

Depending on organizational culture, training programs can be used as ultimatums, where employees must improve knowledge, skills, and abilities or risk termination, or as organizational incentives, where employees choose programs as self-development opportunities. Organizations that allow their employees more freedom of choice with regard to the types of training programs they participate in will have higher rates of retention because employees will feel that the organization values self-development. In contrast, organizations that use training programs as ultimatums will have higher turnover rates because employees will resent the training programs.

To be effective, human resource development programs must be designed according to the results of a needs assessment. For training programs in particular, organizations must take into account three levels of needs assessment (Harris & Desimone, 1994). First, when designing a training program, an organization analysis should be conducted to determine where in the organization training is needed and under what conditions it will occur. According to Goldstein (1986), an organization analysis should identify organizational goals and resources, as well as the organizational climate for training and the environmental constraints on training. Second, to design a training program, a task analysis must be performed to determine the particular tasks associated with effective job performance. The task analysis determines the content and priorities of the training program by developing an

overall job description based on task identification and the knowledge, skills, and abilities necessary for effective job performance. Third, when designing a training program, a person analysis must be performed which determines who should be trained, and the type of training needed. An accurate person analysis ensures individual customization of training, which results in higher levels of satisfaction, and consequent increases in retention (Harris & Desimone, 1994).

The most effectively designed training strategies are based on needs assessments which address three crucial factors directly affecting training program success (Harris & Desimone, 1994). The first factor that directly affects the success of a training program is the objective of the program itself. Training programs are successful when their objectives are clearly defined since training methods are chosen on that basis. For example, if the training objective involves improving interpersonal communication skills, then the most effective training methods will be behaviour modelling and role playing, rather than lecture and video. Training programs are also more successful if the availability of organizational resources is taken into account during the design process. Specifically, money, time, and other resources, such as necessary training equipment and trainers represent the second factor pertaining to the success of training programs. The third factor affecting training program success is trainee characteristics. Because individuals have different learning styles, some training methods may be more suitable than others. In other words, an approach to training must include a comprehensive design phase based on a thorough needs assessment which aids in data collection regarding training program objectives, organizational resources, and trainee characteristics.

Training has been found to be directly associated with higher productivity and lower employee turnover (Lynch & Black, 1998; Frazis, et al., 1998; Joinson, 1995; Bouillon, 1995/1996; Glance et al., 1997). However, practitioner-based research has also focused on the existence of an indirect link between employee training and turnover. It is said that “the link between training and turnover is a subtle one, sometimes showing up two or three times removed”(Hequet, 1993, p. 84). For example, lack of cross-training of front-line staff may lead to high turnover among supervisory staff because the supervisors feel that their reputation is jeopardized by staff who simply do not have the necessary skills to effectively perform the tasks at hand. Similarly, organizations that do not provide diversity training programs to their managers run the risk of high turnover rates among minority employees.

Organizational training programs are vital retention tools because an investment in training is an indication to employees that the organization values long-term relationships with its human resources. In essence, what keeps companies from losing the retention game is “their willingness to accept that today’s economy revolves around knowledge and skills that are constantly changing. Keeping pace requires keeping employees who evolve with those changes. And training and education...are the keys”(Dobbs, 1999, p. 56).

Career Development: Scholarly research has linked career development programs with enhanced employee retention (Evans, 1988; Keltner & Finegold, 1996; Stumpf, 1988; Young, 1991). Also, research from practitioners has estimated that return on investment for career development programs can be higher than 100% (Eldson & Iyer, 1999). Organizations use a number of tools in career development programs, including self-assessment mechanisms,

counselling, psychological testing, job rotation, mentoring, and skills inventories.

Career development focuses on career exploration and the development of the individual. There is a strong relationship between training and career development in that career plans often develop within, or as a result of, organizational training programs. Career development is an ongoing process by which individuals progress through a series of stages, each of which is characterized by a unique set of issues, themes, and tasks (Greenhaus, 1987). A career is part of a person's total life, and is affected by life issues. Because career development takes on different meanings at different stages of the individual life cycle, it is best examined through the life cycle framework (Erikson, 1963; Levinson, 1986). Life cycle theory can be used to identify issues facing employees at particular times, and to plan career-development interventions around those issues. Although the HR department of an organization bears the responsibility for creating career development strategies and procedures, the employee is also responsible for ensuring successful career development by articulating his/her self-development interests, goals, and preferences.

Career-development strategies contain two basic aspects. The first aspect is career planning, which is a deliberate process of (1) becoming aware of self, opportunities, constraints, choices, and consequences, (2) identifying career-related goals, and (3) programming work, education, and related developmental experiences to attain a specific career goal (Storey, 1976, in Harris & Desimone, 1994). In other words, career planning is an attempt by the employee to understand and control the work experience. However, the individual need not perform career planning alone. The organization can also be helpful by providing counselling programs to analyse employees' knowledge, skills, and abilities, and

explore employee preferences. By helping employees plan their careers, the organization also gains insight that helps to determine the nature and extent of promotion opportunities for employees.

The second aspect of career development is career management, which refers to the individual's attempt to carry out career plans. By helping employees manage their careers, organizations ensure the realization of future human resource objectives. For instance, effective career management programs aid in creating an organizational database of potential candidates who may be moved either horizontally or vertically in the organization to replace others who have quit or been promoted.

To design a successful career development initiative, three issues must be considered (Leibowitz et al., 1985). First, career development programs must be based on a needs assessment. An accurate and thorough needs assessment will help to tie the career development program to HR practices and policies, and succeed in tailoring a development initiative which fits the organizational culture. Second, organizations must design career development programs which combine long-term approaches with short-term payoffs, and which include multiple methods that are considered useful by employees. Third, organizations must develop a strategic implementation process for career development programs. For example, successful programs begin as pilot projects which are thoroughly monitored and evaluated, and include visible top management support and recognition for accomplishments (Leibowitz et al., 1985).

The literature from practitioners lists a number of content-related factors intended to ensure successful implementation of career development programs. For instance, it is said that successful career development programs are based on ten principles which lead to reduced turnover rates. The 'ten commandments' (Briscoe, 1987) of career development are:

1. Development occurs largely on the job, where learning takes place by practicing new skills
2. Different jobs require different skills
3. The job must contain a challenge
4. The challenge experience must be continual, but gradual
5. Periodic recharging eases the stress of a new learning situation
6. Development must be an essential part of management's job
7. All development is basically self-development
8. Organizations should base promotions as much on assessed potential as on observed performance
9. Organizations must consider the total individual
10. Successful development programs require monitoring

According to practitioner-based findings, to be successful, career development initiatives must also be continuously monitored to ensure that they meet both the needs of the organization and the needs of employees.

Motivation: Motivation is the psychological process that causes all goal directed, voluntary actions (Mitchell, 1982). Motivation is the underlying cause of all voluntary behaviour in the work environment because even in situations where employees feel they do not have a choice,

their behaviour reflects their perceptions of the consequences of their actions (Harris & Desimone, 1994). Since voluntary actions form a large part of work behaviour, understanding how individuals are motivated is a critical issue in organizational science. Although no single, all-inclusive empirical explanation of individual motivation exists as yet (Katzell & Thompson, 1990; Pinder, 1984), attempts to examine motivation can be grouped into three main categories.

The first approach to the study of motivation consists of needs-based motivation theories. Needs-based theories such as the renowned Need Hierarchy theory developed by Maslow (1968) are based on the premise that underlying needs drive motivation. Needs-based theories basically state that needs emerge in a particular sequence, with those pertaining to immediate survival being first to emerge, and those most salient in terms of satisfaction of psychological and social desires the last to emerge. Once the first set of needs are satisfied, the next set emerges and affects behaviour, and the motivational cycle evolves. Needs-based theories are also regarded as content-based theories in the scholarly literature, since they focus on what motivates individual behaviour (Vecchio, 1991).

The second approach to the study of motivation consists of cognitive theories. Cognitive theorists argue that motivation is a process controlled by individual perceptions, beliefs, and judgements. Both Vroom's expectancy theory (1964) and Adams' equity theory (1963) are classic motivational theories. Expectancy theory is based on the premise that felt needs cause human behaviour. According to proponents of expectancy theory, individuals choose to emphasize certain behaviours because of their belief that those particular behaviours will produce desired outcomes. However, according to expectancy theory, the individual will

only perform the extra effort if the reward is considered valuable enough to warrant it because, in general, individuals behave in ways that maximize personal rewards (Certo, et al., 1993). Therefore, it is essential to determine the types of rewards valued by employees. Equity theory is based on the premise that individuals will alter their behaviour according to their perceptions of fairness in the workplace. According to equity theory, it is essential to ask individuals their reactions to possible outcomes and inputs, and to determine their perceptions of fairness in the work environment (Vecchio, 1991). The Porter-Lawler theory (1968) is another example of a cognitive motivation theory, and it stresses the importance of three other elements of the motivational process. First, the perceived value of a reward is determined by the extent to which intrinsic and extrinsic needs are satisfied when a task is accomplished. Second, the extent to which an individual effectively accomplishes a task is determined by two variables: the individual's ability to perform the task, and the individual's perception of what is required to perform the task. Third, the amount of satisfaction the individual experiences as a result of rewards is directly influenced by the individual's perception of the fairness of the rewards (Porter & Lawler, 1968).

The third approach to the study of motivation is composed of non-cognitive theories, such as reinforcement theory, which are based on the premise that motivation can be explained by external events, rather than by internal thoughts or needs. Reinforcement theorists argue that behaviour is a function of its consequences, and that behaviour followed by a positive outcome is likely to reoccur, while behaviour followed by a negative outcome is likely to cease. Reinforcement theorists state that employees can be motivated by processes of positive and negative reinforcement, extinction, and punishment. Both cognitive and non-cognitive

theories are regarded as process theories in the scholarly literature because they focus on how rewards control individual behaviour (Vecchio, 1991).

There are two types of motivation. The first type is intrinsic motivation, which is the degree to which the employee is self-motivated to perform effectively on the job (Lillian et al, 1999). Intrinsic motivation is based on individual perceptions regarding the meaningfulness of work tasks, and fairness in the work environment. Essentially, intrinsically motivated employees have positive feelings when performing effectively on the job and when their performance is in alignment with organizational goals. Research has determined that the three psychological states of meaningfulness of work, responsibility for work outcomes, and knowledge of work results must exist in order for internal motivation to exist (Lee-Ross, 1995). The second type of motivation is extrinsic motivation, which is derived from outside sources, such as organizational reward structures and compensation plans. It must be mentioned at this point that intrinsic motivation cannot be achieved if extrinsic motivation is not being maintained in the form of rewards and incentives.

According to Hackman & Oldham (1976), jobs with motivating potential are those which include high skill variety, task significance, task identity, autonomy, and feedback. Thus, in addition to providing competitive financial incentives, successful employee motivation strategies involve taking into account intrinsic motivational factors. Research on non-financial motivation has indicated that successful motivators include recognition, communication, education, participation, and support (Lillian et al., 1999).

The relationship between employee retention and motivation is critical (Guastello, 1987; Romzek, 1990; Campion, 1991). Research has demonstrated that employee motivation is linked to employee retention through the enhancement of organizational commitment and job satisfaction (Decotiis & Summers, 1987; Scholl, 1981; Vinokur-Kaplan et al., 1994). It has also been noted that the individual perception of the psychological contract with the organization affects motivation, which indirectly affects retention (Butler et al., 1983; Rousseau & Wade-Benzoni, 1994). In addition, scholarly exploration has also focused on age and, in particular, generational differences in employee motivation which affect retention (Laabs, 1996; Jurkiewicz & Brown, 1998). Many HR managers are seeking to forestall a predicted decline in the motivation of Generation X employees with a variety of new motivational tactics intended to increase retention (Creech, 1995; Emmert & Taher, 1992; Kovach, 1995; Tulgan, 1995). For example, rewards for performance include a variety of non-financial incentives, such as work environment perks, and quality of life benefits.

Scholarly evidence is not conclusive regarding whether intrinsic or extrinsic motivational strategies are the most critical with regard to employee retention. However, practitioner findings indicate the emergence of a trend toward the increased importance of intrinsic incentives (Buckman, 1991; Griggs & Manring, 1986). The practitioner literature has noted that although intrinsic motivational strategies must be supported by extrinsic rewards like compensation, benefits, and bonuses, such rewards are secondary. HR practitioner surveys have reported that employees view non-financial motivators such as recognition, participation, support, and communication as the most valuable aspects of their work (Griggs & Manring, 1986; Althaus, 1989). It is for this reason that organizations today expend a great deal of effort

creating various innovative employee reward strategies, such as job enrichment, and job design flexibility. For “today’s career-focused employees, the offer of self-development and good training can be as motivational as a bonus” (Wolfson, 1998, p. 8).

A shift in emphasis toward intrinsic incentives may well prove to be the answer to the predicament of escalating compensation costs (Buckman, 1991). A further illustration of the importance of intrinsic incentives to employee motivation can be found in the results of a recent practitioner-oriented study (Althaus, 1989). The study surveyed both employees and their supervisors concerning factors employees perceived to be the most valuable aspects of their jobs. In order of importance, according to the employees, the most valuable aspects of their jobs were:

1) Appreciation for work done; 2) Feeling involved; 3) Sympathetic understanding of personal problems; 4) Job security; 5) Money; 6) Interesting work; 7) Promotion and growth opportunity; 8) Management loyalty; 9) Good working conditions; 10) Tactful discipline. The results of this study support the trend toward the importance of intrinsic incentives since money did not rank first with employees, contrary to supervisors’ beliefs that it would (Althaus, 1989).

The practitioner literature also bridges the gap between theory and practice by focusing on specific motivational tactics designed to increase employee retention. Essentially, according to practitioner findings, employee motivation involves five strategies (Buckman, 1991). The five strategies are: mutual commitment between owners and employees, recognition and respect of employees, financial investment in employee professional and personal growth, employee participation in decision-making, and encouraging teamwork.

Compensation: Compensation is used by organizations both to reward employees for current work efforts, and to encourage continued work efforts. Compensation policies are part of an overall organizational reward structure that seeks to influence employee behaviour. A typical reward structure has three components (Harris & Desimone, 1994). The first component of a reward structure is the method of reward distribution. For instance, rewards may be equally distributed among employees, or they may be proportionally distributed according to individual contribution. The second component of a reward structure involves the criteria for reward distribution. For example, organizations may choose to distribute rewards based on the attainment of organizational objectives, the performance of organizationally-valued behaviours, or based on tenure with the organization. The last, and most critical component of a reward structure is the organizational compensation plan, which refers to the type of rewards chosen for distribution by the organization.

Organizations administer different types of compensation plans, however, in general, two forms of compensation are used. First, organizations use financial incentives to motivate employee performance. Financial incentives are the cornerstone of organizational compensation plans, and include such things as annual salary, bonuses, commission, and financial benefits like insurance plans, retirement pensions, education allowances, vacation pay, royalty compensation, company vehicles, and corporate expense accounts. Traditionally, financial incentives were thought to have the greatest motivational effect on employee conduct (Kim, 1999). As a matter of fact, it has been said that “ever since the Phoenicians invented money, there has been only one way to show appreciation for a job well done”(Hale, 1998, p. 39). Research has also shown that financial incentives affect retention by enhancing employee

commitment (Higginbotham, 1997). Although monetary incentives are critical, the present social movement promoting the value of work/life balance has placed greater emphasis on nonfinancial incentives.

Nonfinancial incentives, or benefits, are the second form of compensation available to organizations to motivate employee behaviour. Typically, nonmonetary incentives include such things as flexible hours, telecommuting, vacation time, casual dress policies, challenging work assignments, and recognition. Although employees still consider pay an important factor when choosing to maintain organizational affiliation, increasingly competition over the retention of employees often focuses on noncash incentives such as career development opportunities, flex hours, and work/life balance (Ermel & Bohl, 1997). As a matter of fact, the practitioner literature has noted that baiting employees with lucrative pay packages has actually back-fired for some organizations because when employees get big windfalls, they tend to work less, essentially buying more leisure time (Cappelli, 2000). In addition, the practitioner literature states that well-designed benefits programs are crucial for retaining employees because they demonstrate management's recognition of an employee's personal and family life (Lineberry & Trumble, 2000). Since neither financial nor nonfinancial incentives adequately influence employee behaviour on their own, researchers have recommended that organizations adopt a strategic reward system including both types of incentives (Hale, 1998; Harris & Desimone, 1994; Lust & Fay, 1989).

According to Lineberry & Trumble (2000), effective compensation plans give priority to the major benefit drivers of employee commitment, such as retirement benefits, medical care, and stock ownership, while also considering less traditional benefits, such as employee

assistance plans, flexible work schedules, benefit choice, day care, and financial planning. In addition, effective compensation plans involve employee participation. After all, only employees can communicate the type of compensation package best geared to preserving their loyalty. Essentially, compensation plans must be well-communicated, must support desired organizational activities by offering valuable rewards, and must not support undesirable behaviour and activities (Schiemann, 1990).

The link between compensation and turnover has been widely studied from both scholarly and practitioner standpoints (Bretz et al., 1994; Harris & Desimone, 1994; Heneman et al., 1998; Lineberry & Trumble, 2000; Oldham et al, 1986). For instance, pay level has been found to be negatively related to employee turnover (Freeman, 1980; Freeman & Medoff, 1982; Klaas & McClendon, 1996). Also, the relationship between a combination of financial and nonfinancial incentives and employee turnover has been found to be negative and statistically significant (Lust & Fay, 1989). Compensation is also indirectly related to retention through its relationship to job satisfaction and organizational commitment (Heneman et al., 1998). Research has demonstrated that employees who are satisfied with their level and method of compensation will also be satisfied with their jobs, committed to the organization, and will be less likely to quit (Bretz et al., 1994; Heshizer, 1994).

Increasingly, instead of the 'old school' attitude of one set of rules for all employees, organizations are learning to balance compensation plans and be flexible by tailoring compensation packages to the individual (Franklin, 1997). Some organizations now offer employees choices between benefits. This allows organizations to demonstrate appreciation for the interests of diverse employee groups. Research from practitioners has demonstrated

that employees value the ability to select a benefits package that matches their individual needs, and that many employers contend that flexible benefits plans help retain employees by better fulfilling their needs (Heshizer, 1994). In addition, the practitioner literature outlines some specific content-related factors intended to ensure the success of organizational compensation programs. Successful pay strategies must be strategic in nature with strong links to critical business priorities, and must be clearly communicated and understood by employees. Plans that consider employee feedback yield the best return (Williams & Sunderland, 1999). The results of one practitioner-based study reveal a dramatic shift in organizational rewards strategy over the past few years, and provide a set of four guidelines that HR managers can use when designing rewards programs (Laabs, 1998). The four guidelines are:

1. Ensure that rewards are tied to a complete business strategy;
2. Link the reward strategy across organizational divisions;
3. Structure rewards programs, but allow for flexibility;
4. Realize that rewards increase retention, and that well-designed rewards programs result in increased return on investment.

Also, according to Schiemann (1990), organizations should focus on nine issues when designing compensation plans:

1. The strategic use of compensation plans;
2. The role of compensation in productivity improvement;
3. A restructuring of benefits packages;
4. Flexible compensation;

5. Compensation for performance;
6. Gainsharing and companywide incentives;
7. Multitiered incentive systems;
8. Incentive periods based on goal periods;
9. Communication and education.

In addition, practitioner research states that organizations can control retention and ensure a return on their investment in compensation by applying the tools of financial analysis when designing compensation plans. This serves to reclassify compensation as an investment to be harvested, rather than a cost to be controlled (Leblanc et al., 1998). To do this, organizations identify areas of operation where compensation has not produced desired performance results. Using this knowledge of the opportunity cost for existing programs, organizations can structure future compensation programs to improve return.

Feedback and Evaluation: The concept of feedback and evaluation as a retention best practice is recognized in the literature on employee turnover (Garger, 1999; Haynes, 1986; Lee & Mowday, 1987; Lyne, 1989; Sawyer, 1992; Scott et al., 1999; Singh, 1998; Snow-Antle et al., 1989) because acquiring the knowledge necessary to maintain staff loyalty involves consulting employees concerning their needs, and ascertaining the reasons departing employees have chosen to leave the organization.

Evaluation programs serve a number of purposes, including determining whether an HR program is accomplishing its objectives, determining the cost/benefit ratio of an HR program, establishing a data base to assist management in making decisions regarding the HR

program, and gathering data to assist in the marketing of future programs (Phillips, 1983). By evaluating retention strategies, organizations can assess whether or not those strategies have been successful at reducing voluntary turnover rates. Evaluation procedures involve measuring the success of a retention strategy in terms of the bottom line. For example, organizations must review their turnover rates and staff replacement figures to verify that they have decreased. However, in addition to a review of organizational documentation, organizations must not overlook feedback because “failure to pay attention to how your staff...perceive your firm or company can result in increased turnover and losses of intellectual capital”(Messmer, 1999). To determine whether or not a retention strategy is effective, an organization must evaluate its policies of orientation, training, career development, motivation, and compensation by attaining employee feedback. In addition, organizations must continually evaluate their retention strategies to keep pace with changing times and worker feedback (Messmer, 1999).

The feedback process should be performed as part of an ongoing evaluation plan geared toward creating adaptive, avant-garde retention strategies. Two common methods of feedback exist in organizations. The first type of feedback involves providing employee performance information. Performance feedback has been directly linked to turnover by a number of researchers (Haynes, 1986; Lane et al., 1991; Quarles, 1994; Sawyer, 1992; Singh, 1998) and, as such, may be regarded as a practice organizations can implement to increase retention rates. Essentially, performance feedback is intended to supply information about the results of work activities to motivate employees to ameliorate their performance (Singh, 1998).

The second form of feedback is survey feedback, which entails providing employees with the results of survey data to stimulate discussion of problem areas, generate potential solutions, and motivate change (Nicholas, 1982). Survey feedback has been demonstrated to have a statistically significant effect on organizational performance measures (Bowers, 1973). Employee feedback is a critical component of the evaluation process because employee perceptions affect job satisfaction, motivation, performance, and turnover (Lyne, 1989). According to Lyne (1989), feedback is most effective when it is planned in the form of an employee survey, administered according to recognized practices, and when results are tabulated by organizational and demographic categories.

Feedback from targeted employees should be acquired concerning the overall organizational retention strategy. For example, general knowledge of retention program elements should be assessed. Also, feedback from targeted employees should be acquired concerning specific retention program elements. For instance, feedback should be obtained regarding the organization's orientation policies, training and career development programs, and compensation systems in particular. Survey feedback has been shown to enhance retention because it leads employees to feel that their contributions to, and participation in, the evaluation process are recognized and appreciated (Hirschfield, 1991; Huselid, 1995; Lyne, 1989; Snow-Antle et al., 1989). According to Hirschfield (1991), well-designed survey feedback mechanisms take into account issues related to the work environment, employee functioning, organizational issues and structures, and customer variables.

In addition, scholarly evidence and practitioner-based field work have noted the importance of using exit interviews to elicit employee feedback (Feldman & Klaas, 1999; Kennedy, 1996; Meyer, 1991). HR managers conduct exit interviews to retrospectively analyze employees' reasons for turnover with the goal of addressing the concerns of those employees who remain (Drost et al., 1987; McConnell, 1992). The accuracy of exit interview feedback depends upon the willingness and ability of employees to report their true reasons for leaving the organization. Although concerns have been raised about the reliability and validity of exit interview data (Kennedy, 1996; Meyer, 1991), practitioner findings do demonstrate that well-designed exit interviews can have a positive effect on employee retention (Giacolone, 1996; Kiechel, 1990; Messmer, 1993; Umiker, 1993). Employees are more likely to disclose their reasons for departure when exit questionnaire data are treated confidentially and fed back in aggregate form, when employees are protected from supervisor retaliation in the form of negative recommendations, and when organizations have previously fixed problems systematically raised in exit interviews (Feldman & Klaas, 1999).

Employee Retention in the IT Industry

The six factors previously discussed are crucial for technology organizations. IT organizations are especially concerned with increasing employee retention rates, since organizational poaching of scarce human capital has resulted in high turnover rates among IT professionals. Thus, the creation of a best practice model of employee retention is a salient issue for IT firms. Specifically, IT organizations with well-designed orientation, training,

career development, motivation, compensation, and feedback and evaluation programs will be successful at retaining their current internal workforce, and at recruiting new members. As such, IT firms that conform to the scholarly and practitioner guidelines for implementing the six retention best practices will be rewarded with a more stable pool of human resources.

As has been previously demonstrated, the six best practices have all been empirically examined with regard to their relationship with employee turnover and, as such, will serve as benchmarks for this exploratory study. However, it must be noted that there is a lack of empirical research concerning employee retention in the IT industry in particular (Kamoche & Mueller, 1998; Causer & Jones, 1993; Tan & Igarria, 1994; Lee et al., 1999; Chan et al., 1997). As a matter of fact, most research on the topic of turnover has focused exclusively on strategies organizations can implement to successfully adapt to high levels of turnover (Mowday, 1984; Doyle & Carolan, 1998; McGovern, 1995). Some research has been done concerning the effect of motivation (Halcrow, 1988) and compensation (Talmor & Wallace, 1998; Tan & Igarria, 1994), but there is a lack of specific research concerning the effects of the six best practices on retention in the IT industry. It is clear that more empirical exploration is necessary in this area. Specifically, the following section will present the critical contextual factors affecting the retention rates of IT organizations, and will discuss the relevance of each of the six retention best practices to organizations competing in the IT sector.

Orientation in the IT Industry

High performance in the area of orientation is crucial for IT organizations, who are seeking to maintain employee loyalty in an industry where average annual turnover rates exceeding 35% are not uncommon (France & Jarvis, 1996; Kinsey-Goman, 2000). Since the knowledge and experience of IT professionals who have been successfully recruited or poached from other firms is necessary for sustaining the competitive edge of IT organizations (Niehaus & Swiercz, 1997), their retention is an organizational priority. For newcomers who are a good fit with the organizational culture, proper orientation is tantamount to rolling out the welcome mat to make new employees feel more comfortable and ease their adjustment period to the new work environment. However, for IT organizations, the orientation process also serves as an additional screening tool in the selection process which aids in weeding out those who will not be a good fit with the organizational culture. Also, giving newcomers the opportunity to self-select out of the organization during orientation reduces the chance of security breaches later on. Because of aggressive competition between organizations to develop new products, the projects IT professionals work on are often confidential. Newcomers who self-select out of the organization after beginning work and being exposed to confidential product development are threats to organizational security. Consequently, employees who find out that they are not a good fit with the organizational culture after the orientation process is completed can wind up being expensive organizational errors (Wright et al., 1994). Thus, a properly designed orientation process is important in IT organizations for two reasons. First, it allows newcomers the opportunity to self-select out of the organization before a significant investment of time and money has been made in them. Second, orientation

gives newcomers a chance to self-select out of the organization before they become privy to inside information about organizational tactics that can be used as leverage with poachers, and that can threaten organizational survival if leaked (Waung, 1995).

The content of orientation programs is also important for IT organizations. For instance, in high technology organizations, return on investment begins to increase after an employee has been with the organization for two years (Kinsey-Goman, 2000). Therefore, orientation programs that either do not include, or include inaccurate job previews can be costly to IT organizations because employees leave the organization before it achieves a sufficient return on employee investment.

Training in the IT Industry

Training is also critical to organizations competing in the IT sector. With the demand for IT professionals growing, and the simultaneous shortage of experienced talent, IT organizations are forced to use training to fulfill two organizational objectives. First, IT corporations must train employees to ensure that they are familiar with the latest technology and have the skills that are required to provide technology solutions and services. Skills training is targeted to two very different sets of job incumbents. Primarily, experienced technology professionals seek to upgrade their current technical skills by participating in technical courses and by attending industry and trade seminars to learn about the latest products and developments in their areas of expertise. However, due to the labour shortage, many IT organizations are also struggling to reinforce their internal work force by creating training programs geared toward employees who don't have technical experience but want

to break into IT”(Watson, 1999, p. 24). Such a varied array of training targets requires the customization of training programs to the individual. A proper needs assessment and person analysis will be particularly beneficial for IT organizations seeking to individually customize training programs.

The second objective of training programs in IT organizations is to enhance employee retention by keeping IT professionals “challenged, satisfied, and away from headhunters and recruiters”(Watson, 1999, p. 22). Applied research has determined that one of the most frequent reasons cited by IT professionals for leaving organizations is lack of training opportunities (Butteriss, 1999; Dobbs, 1999; Kinsey-Goman, 2000). As has been previously discussed, younger workers, who form the majority of the IT workforce, are comfortable with cyclical corporate downsizing, reorganization, and mergers, and view themselves as the architects of their own careers. As such, they are continually seeking opportunities to upgrade their skills to enhance their competitiveness in the IT arena. Also, IT professionals will tend to be more loyal to the technology rather than the firm should they find a position elsewhere that they believe better employs their talents. Applied research has noted that “typically, IT staff love their work, and this love for technology plays a large role in motivating them to focus on the technology rather than the employer” (Mork & Sovitsky, 1999, p. 3). Thus, the availability of an extensive array of training opportunities will increase retention because it is an indication that the organization is willing to invest in its human resources, and because training provides IT professionals the chance to broaden their technological experience.

Career Development in the IT Industry

The fast-paced and continual evolution of technology makes properly implemented career development programs imperative for IT organizations. The constant changes in the IT sector make the concept of lifetime specialization obsolete. IT professionals will not only change jobs frequently during their careers, but, they will likely change careers as well (Cliffe, 1998). For instance, an IT professional may begin the workforce journey in a call centre supporting networks, but may wind up retiring from a sales position for computer hardware components. For IT professionals to remain valuable assets to corporations in the technology field, they must constantly strive to upgrade their skills. During their training experiences, IT employees will be exposed to a variety of career alternatives, which will lead many of them to switch career paths. Career development programs are designed to instigate and accompany employees on journeys of self-awareness, with the purpose of communicating to employees that the organization can accommodate career shift choices. For example, during a career development program, a call centre employee may express interest in sales. A prompt organizational response would be to give the employee sales training, to ascertain the employee's proficiency in sales, and to determine whether more in-depth exposure to sales furthered or diminished the employee's interest in the field. If the employee is proficient and still interested, discussions would follow concerning a transfer to the sales department. In this case, a well implemented career development program could lead to the retention of a valuable employee whose loyalty to the organization would be strengthened, and whose technical expertise would be an asset in another department. Thus, successful career development programs enhance retention by helping IT organizations keep pace with rapid technological

evolution, and changing employee requirements.

Motivation in the IT Industry

Motivation is an important issue in the IT sector because IT employees are motivated differently than employees in other economic sectors (Cuadron, 1994; Griggs & Manning, 1986). For instance, it is said that “technical professionals generally do not value traditional monetary rewards highly, and such rewards do not contribute to motivation or retention”(Griggs & Manning, 1986, pp. 64). According to Cuadron (1994), the availability of numerous job alternatives, the resulting inflated extrinsic financial incentives, and loyalty to the discipline rather than the firm has led IT professionals to place increased value on intrinsic incentives such as task variety, training availability, career development opportunities, and quality of life benefits. In other words, the abundance of opportunities to acquire financial incentives has led to a focus on intrinsic motivational factors. On the one hand, technology organizations are seeking to offer more intrinsic motivators to render financial bidding wars for IT employees moot. On the other hand, IT employees have come to expect lucrative financial incentives, and are choosing to remain in organizations that take into account intrinsic motivational issues. This does not discount the import of extrinsic motivators. Extrinsic incentives are still important to IT professionals, however, they are being given lesser priority by employees due to their increased availability.

The trend toward providing increasing amounts of intrinsic incentives to employees indicates the relevance of expectancy and equity motivation theories to IT professionals. For instance, in terms of expectancy theory, the value placed by IT professionals on intrinsic

incentives will determine their loyalty towards the organizations in which they work. For this reason, empirical exploration of the types of organizational incentive strategies most likely to influence organizational loyalty in IT professionals is required. With regard to equity theory, it has been empirically demonstrated that employees alter their behaviour based on their perceptions of workplace fairness. Thus, IT employees who perceive inequities in the organizational implementation of the six retention best practices will seek alternative employment opportunities.

Compensation in the IT Industry

Compensation is also significant to organizations competing in the IT sector. Even though intrinsic motivational tactics are being increasingly prioritized in the IT sector, compensation still plays a large role in motivating employee commitment to an organization by increasing job satisfaction. Due to the current labour shortage in the IT sector, organizations striving to compete for scarce human resources must ensure that their compensation packages are competitive because “the extremely tight labour market gives techies a wealth of opportunities” (Cappelli, 2000, pp. 110), so they can afford to be choosy. Salaries at least at par with the market are a must, as are innovative methods of non-monetary compensation, to keep the organization attractive to its internal work force (Talmor & Wallace, 1998). Practitioner-based findings have demonstrated that “while increased use of hiring bonuses may gain headline attention, it will be the effective combination of programs, including recognition and lifestyle benefits, that keeps a company’s compensation and benefits approach competitive”(Ermel & Bohl, 1997, pp. 28).

One-size-fits-all approaches to compensation and benefits packages will no longer suffice. Instead, packages based on customization will be successful. Many IT organizations have pioneered customized compensation plans designed around the needs of technical professionals by taking into account the factors influencing their level of motivation. For example, many IT firms have adopted royalty compensation plans that give IT professionals the right to participate in the commercial success of the products they create. By sharing a percentage of profits with key contributors, IT organizations are “hoping to jumpstart the creativity and productivity needed for successful product commercialization, and to encourage high performers to remain within the organizational framework”(Cuadron, 1994, p. 105).

Thus, to maintain a competitive compensation system, organizations must pay close attention to strategic approaches which emphasize rewarding behaviour that reinforces organizational objectives, and which include both monetary and non-monetary incentives. In addition to offering competitive financial compensation, an IT organization’s “ability to offer challenging work, recognition for accomplishments, and ‘lifestyle benefits’ will give them the edge in attracting and holding...information systems professionals”(Ermel &Bohl, 1997, pp. 26).

Feedback and Evaluation in the IT Industry

The feedback and evaluation process is also essential for IT organizations. Both performance feedback and survey feedback are relevant organizational issues in the IT sector. First, performance feedback is beneficial to both organizations and employees in the IT industry. From the organizational standpoint, performance feedback serves as an index of

human resource effectiveness. For example, a decline in previous star performers' work performance may indicate emergent dissatisfaction with the organization, and intention to leave. Further investigation and correction of the causes of the dissatisfaction may lead to retention of a valuable employee. From the employee standpoint, IT employees seek performance feedback to evaluate their contributions to the organization. As has been previously noted, the IT professional age demographic is weighted heavily toward the Generation X cohort. According to applied research, Generation X individuals seek feedback that is accurate and specific because they monitor their performance aggressively to guide the process of ongoing change in their careers (Gabriel, 1999, pp. 32). Since technology changes so rapidly, IT professionals are forced to upgrade their skills virtually constantly to remain effective organizational contributors. Timely performance feedback serves as recognition of the effort made by IT employees to keep up to date with current technological trends that affect organizational productivity.

Second, survey feedback is beneficial to organizations and employees in the IT industry. Survey feedback processes designed according to the recommendations in the scholarly and practitioner literature are effective ways of gauging the success of the organization's retention program. Also, survey feedback communicates to IT professionals that they work in an organizational culture where their opinions are valued and are reflected in decision-making.

Barriers to Implementing the Best Practices

Before discussing the barriers to implementing the best practices, it must be noted that the concept of turnover implies both positive and negative facets. Some researchers have stated that the emphasis on turnover frequency can lead to the false assumption that all turnover is dysfunctional, when in fact, that is not the case (Johnston & Futrell, 1989; Mendonsa, 1998). In some cases, departments actually benefit from having a new person who is more likely to be active and involved in making a difference, and the person who has left may find a work environment more suited to their abilities where they may be more successful. Positive turnover occurs when an organization loses low performing staff. From an organizational perspective, this type of turnover is desirable because it protects the organization from the high costs associated with lack of productivity. In addition, positive turnover also protects the organization from the consequences of unresponsive employees, such as the impaired ability to compete through the generation of new product ideas (Johnston & Futrell, 1989). Also, for IT organizations, a certain level of turnover may be a positive force within the organization, since new employees from other organizations bring with them fresh ideas and occasionally corporate secrets that can serve to increase organizational productivity and competitiveness. It is important to note that positive turnover can be brought about by the organization itself through dismissal and by providing low performers with incentives to leave, or by the employee, through a decision to quit the organization.

Negative turnover is said to occur when an organization loses valuable human resources, and is not desirable from an organizational standpoint because of the costs inherent in losing productive individuals to competitors. Negative turnover is the decision to discontinue affiliation with an organization, and can be brought about by a number of issues, including better alternatives, less than desirable working conditions, and poor person-organization fit.

As is expected in the case of any human resource development strategy, barriers will exist regarding the implementation of retention best practices (Huselid, 1995; Pfeffer, 1996; Terpstra & Rozell, 1997). Although the literature from practitioners does demonstrate the existence of a variety of implementation barriers regarding HR best practices, such as “financial systems, social and political pressures, and hierarchical structures” (Pfeffer, 1996, p. 38), very little scholarly exploration of the effect of these barriers on strategy adoption and practice exists. Only one empirical study was found which examined the reasons some organizations do not adopt human resource management best practices (Terpstra & Rozell, 1997). The study found that lack of familiarity, beliefs concerning usefulness, and resource constraints were the most common reasons organizations chose not to adopt HR best practices related to staffing (Terpstra & Rozell, 1997). There is a clear need for empirical exploration regarding the existence and effect of implementation barriers regarding employee retention (Martell et al., 1996). In particular, although much research from practitioners exists on the topic, no scholarly research has been found concerning the barriers to implementing the six retention best practices. As well, no research has been found which addresses the unique implementation barriers faced by IT organizations in their attempts to perform the six retention

best practices. This research will redress the lack of empirical analysis in this area by exploring the implementation barriers faced by IT firms in their quest to enhance employee retention rates.

Retention Strategy Implementation Barriers in the IT Industry

Generally, the best practice implementation barriers are the limited time and resources available to IT organizations to invest in a comprehensive employee retention strategy (Garger, 1999). Specifically, organizations may not have the time or finances to invest in all six retention facets equally. Other organizational priorities may cause them to leave some areas out altogether, resulting in less effective overall retention strategies (Pfeffer, 1996). Furthermore, the fear of possible negative consequences of too much, or incorrect, investment in the six retention areas may lead HR practitioners to cut corners with respect to retention best practices. Also, lack of familiarity and beliefs concerning usefulness, having been empirically determined to be barriers to implementing staffing best practices (Terpstra & Rozell, 1997), may be potential barriers to the implementation of retention best practices in the IT industry.

Orientation: Lack of familiarity with orientation methods, and beliefs about the usefulness of orientation programs (Terpstra & Rozell, 1997) are barriers to the implementation of orientation programs in the IT industry. For instance, HR practitioners may not be aware of the wide variety of presentation methods in existence and so, may limit employee orientation to the presentation of policy and procedure manuals. Furthermore, the belief that orientation programs are ineffective retention tools may also cause organizations to avoid the strategy.

However, limited financial resources and time constraints have the largest effect on the orientation process (Wanous, 1992). There are both hidden and direct costs to orientation. Primarily, the direct costs of orientation programs are associated with program presentation. Orientation should be a continual process involving the use of multimedia. However, since organizations have limited financial resources, orientation may not be offered on a continual basis and may not include a multimedia component. In this case, oriented employees would receive a poor presentation, and occasionally, would attend orientation too late for the program to make a difference to cultural socialization. Also, since turnover rates are high in IT organizations, employees typically enter the organization at the rate of a slow trickle. So, at any given time, there are a few employees who require orientation, which further escalates the cost of orientation for the organization.

In addition to program presentation, however, other direct costs of orientation involve the design of the program itself. It has previously been mentioned that orientation marks the beginning of newcomer socialization into the organization. Since socialization is an ongoing process (Van Maanen & Schein, 1979; Klein & Weaver, 2000), orientation is also an ongoing process because with each flow of new hires comes different adjustments to program design (Louis et al., 1983; Van Maanen & Schein, 1979). This implies that organizations will have to reevaluate orientation programs continually so that they are tailored to the needs of individual newcomers, or groups of newcomers. The process of continual renewal of orientation programs is both time-consuming and expensive (Reichers et al., 1994), and thus, may be abandoned by HR practitioners.

Hidden costs of the orientation process typically involve the time of individuals who present the program. Typically, senior managers and line supervisors are busy with daily corporate operations. The participation of these individuals in the orientation process involves postponing daily operations activities and, as such, results in hidden costs for the organization. In cases where these individuals are absent, orientation may be delayed or cancelled. Also, new employees must take time out of their schedules to participate in orientation programs. This can be costly because participation in the orientation program is time that newcomers do not spend being productive on the job. Thus, according to the practitioner literature, orientation programs are often inadequately designed and implemented because organizations do not want to pay the price in terms of “delayed projects, increased workloads, and other pain resulting from bringing a new employee up to speed” (Steen, 1999, pp. 71).

Training: Potential implementation barriers regarding organizational training programs include limited financial resources, time constraints, and the pace of technological advancement (Stone & Meltz, 1993). Theory or research concerning what might influence the decision to use or not to use training is sparse (Colarelli & Montei, 1996). Some investigation has shown cost-benefit analysis to be a leading influence in decisions pertaining to training program implementation (Glance et al., 1997), however, other explorations have pointed to additional contextual factors, such as organization size, organizational turnover rate, and organizational competitive pressure. Specifically, it has been empirically demonstrated that large organizations with high external competitor pressure, and lower turnover provide more training (Colarelli & Montei, 1996; Lynch & Black, 1998).

In IT organizations, training programs are costly because so many diverse training programs must be supported. Often, IT training programs must be tailored to the needs of employees with different specializations, each of which require different certification upgrades. It is costly to upgrade and maintain a diverse spectrum of IT professional certifications. For example, “it costs \$9,500 to train and certify an IS [IT] worker in client-server skills...including training, testing and study materials, lost work time, and travel expenses....and exam fees cost close to \$100 per person, with workers having to be recertified regularly”(Kay, 1996, pp. 59).

Also, the practitioner literature describes the importance of return on investment to the adoption and continuation of organizational support for training programs (Phillips, 1996). Many HR practitioners believe that investment in training does not result in increased return on investment because by the time training programs are complete, skills may already need to be upgraded due to the rapid pace of technological evolution. There have already been documented cases in the IT industry where “by the time the training was developed and the hardware delivered and employed, it was already obsolete”(Bovier, 1993, pp. 29). Thus, beliefs concerning the usefulness (Terpstra & Rozell, 1997) of training as a retention best practice play a role in organizational decisions not to implement training programs.

The cost of running training programs can be more than financial. Corporate morale is also at stake because “while the person is being trained, users will be frustrated by their projects not getting done, and the rest of the IT staff will resent having to pick up the extra work” (Steen, 1999, pp. 72). Furthermore, it must be noted that a lack of familiarity (Terpstra & Rozell, 1997) with the type of training required by IT professionals could also constitute

reasons for not adopting training programs. Human resource professionals may not possess the expertise required for the technical training needed by IT staff, and they may not possess the resources required to support and control access to outsourced training programs.

Time constraints are also potential barriers to implementing training. IT professionals have hectic work schedules that often do not coincide with the traditional work day. This means that training programs may not be operational during the IT work day. Furthermore, even if training is made available to IT professionals during work hours, they often find it impossible to drop out of critical projects to attend classes to learn new skills (King, 1997). Knowing this, HR practitioners often decide to minimize investment in training for IT professionals, or to leave these employees “out of the loop when much-needed training technologies are acquired or implemented, leading to redundant networks, incompatible technologies, and hard feelings all around”(King, 1997, pp. 41). In addition, some organizations may not be willing to risk the tradeoff between training and the fact that employees may use organizational training experiences to get hired by competing organizations.

Career Development: Possible barriers regarding the implementation of career development programs include a cost component as well. Customized career development initiatives are costly, and may be ignored due to other more pressing organizational priorities. In addition to being costly, career development initiatives are ongoing organizational processes which require a planning component. However, scholarly evidence has shown that “career planning is a poorly defined function whose responsibilities span a number of other HRM

functions”(Stone & Meltz, 1993, p. 445). For example, human resource planners may define career opportunities solely in terms of projected job vacancies at certain points in time, and career counselling may be handled within the context of the performance appraisal process. Thus, as a result of a lack of familiarity with the career development process (Terpstra & Rozell, 1997), organizations may not invest the necessary time assessing the skills of personnel and adequately performing career development initiatives because such initiatives have not been defined as a separate human resource function (Baruch, & Rosenstein, 1992).

Beliefs concerning usefulness also have a role in organizational support for career development initiatives (Phillips, 1996). For example, HR practitioners may decide that career development programs involve too much risk of developing the potential of IT employees only to see them move toward other opportunities, taking the organization’s potential return on investment with them. Furthermore, encouraging aspiring IT professionals to move toward management or leadership positions may result in the loss of valuable employees from front-line positions into management, where they may be less proficient, and where their training may not be put to use.

Motivation: Not much scholarly or practitioner research exists regarding barriers to implementing employee motivation strategies. The research that has been done focuses on the theory that potential implementation barriers regarding employee motivation stem from the fact that many HR practitioners feel it is too difficult to define what exactly motivates employees (Steers & Porter, 1987; Cherniss & Kane, 1987). By one definition, “nothing can meaningfully be said to ‘motivate’ people. Various devices can be used to get people to do

something, but that is a far cry from making people want to do something” (Kohn, 1998, p.28). As a result of this belief, any investment in the area of employee motivation, whether monetary or time- related, could be viewed as risky by HR practitioners. Furthermore, a lack of familiarity (Terpstra & Rozell, 1997) with diverse motivational incentive strategies will result in implementation barriers in this area. For example, evidence has shown that technical employees are not motivated by traditional monetary incentives (Griggs & Manning, 1986), and that human resource managers generally do not excel in the determination of factors affecting employee motivation (Medcof & Hausdorf, 1995).

Compensation: Approaches which take into account the current popularity of non-monetary and quality of life benefits in addition to the availability of diverse monetary reward systems can be costly and labour intensive (Martin & Peterson, 1987; Murray & Gerhart, 1998; Stone & Meltz, 1993). Also, it may be difficult to reach a consensus regarding which non-financial benefits to provide since little empirical investigation has been done concerning employee attitudes towards flexible benefit plans (Heshizer, 1994). For example, not all employees are interested in childcare programs. It is difficult for IT organizations to find a method of compensation for employees who are not interested in the non-financial incentives being offered, so that they do not feel left out of this valuable component of the overall compensation package.

In addition, it must be noted that both scholarly research and practitioner findings have indicated that compensation approaches tend to change according to emerging workplace trends (Gerard, 1998; Klaas & McClendon, 1996). For example, the practitioner literature

demonstrates that emphasis is being placed on the value of non-financial incentive plans to IT professionals, but an economic shift could place increased focus on the value of monetary reward plans. Thus, IT organizations finding it costly to keep up with compensation trends may find that the adoption of strategic compensation initiatives is not useful (Terpstra & Rozell, 1997).

Feedback and Evaluation: According to the practitioner literature, potential barriers to the implementation of feedback and evaluation procedures also include a cost component. First, survey feedback can be costly to acquire, and there has been some contention concerning the accuracy and reliability of survey responses (Kennedy, 1996; Meyer, 1991). For example, one common best practice approach to feedback involves the use of exit interviews to determine the reasons for employee turnover. Scholarly research has documented the difficulties organizations face in obtaining reliable and valid information via exit interviews and questionnaires (Feldman & Klaas, 1999; Knouse, et al., 1996; LaFarge, 1994; Lefkowitz & Katz, 1969). For instance, exiting employees may not be willing to meet to discuss their reasons for leaving, and if they do, many are not candid about them. Thus, because of the belief that survey feedback will produce inaccurate or unreliable results, HR practitioners may decide not to design a feedback process to explore employee retention issues.

It is also pertinent to note at this point that evaluation of organizational retention strategies can be a difficult and time-consuming process. Primarily, evaluating each of the six components of the organizational retention strategy is labour-intensive and time-consuming, and may be outweighed by other organizational priorities (Garger, 1999). In addition,

evaluation of retention practices is difficult because such practices must constantly evolve to accommodate shifting conditions in the labour market. It is both difficult and costly to evaluate practices that are in a constant state of flux, so organizations may choose to neglect the evaluation process altogether. Finally, lack of familiarity with evaluation methods may be a barrier to the implementation of evaluation strategy, as is the case with other human resource management practices (Terpstra & Rozell, 1997).

To conclude, the goal of current research is the exploration of various human resource practices and their effect on turnover. The retention best-practice model consists of bundles of human resource practices related to the six factors most cited in the literature to affect turnover, namely, orientation, training, career development, motivation, compensation, and feedback evaluation.

Research Questions and Theoretical Model Summary

The best practice retention model for this study has been developed based on the previous literature review, using practitioner-based field work as a guideline for current trends requiring further empirical exploration. The purpose of this study is to examine the best practice retention model using information provided by HR managers and IT professionals. This study explores three main aspects of employee retention. First, the extent of application of these retention practices in IT organizations is explored. Second, the HR managers' perceived barriers to implementing the practices are described. Third, the study explores the perceptions of IT professionals regarding the effect of the six best practices of orientation,

training, career development, motivation, compensation, and feedback and evaluation on their decisions to remain within the organization.

The overall research design is a qualitative exploration in the form of a set of descriptive case studies. Specifically, a description of the employee retention strategies used by Montreal IT organizations will be presented to explore the potential application of existing theory regarding employee turnover to the IT sector. The following research questions were used to guide data collection:

1. Are Montreal IT organizations actively scrutinizing the turnover rates among their IT professionals? If so, how?
2. Are Montreal IT organizations actively evaluating their employee retention strategies? If so, how?
3. Do the employee retention strategies and practices used by Montreal IT firms conform to the best practice retention model suggested in the literature as the optimum means of reducing employee turnover?
4. If the six best practices are being implemented by Montreal IT organizations, are these methods suitable to IT professionals in terms of affecting their organizational loyalty? If these methods are suitable, which of the six best practices do IT professionals prefer, and why?
5. What are the barriers to implementation of the six retention best practices in Montreal IT organizations?
6. If the current best practices recommended in the literature fail to engender the loyalty of IT professionals, then which alternative methods or strategies would they prefer, and why?

7. If Montreal IT organizations are not implementing the best practices recommended in the literature, what, if anything, are they doing instead to control employee turnover among their technology professionals?

Method

This project is a multiple qualitative case study. First, a qualitative research approach was chosen because a rich, descriptive database is required to fully understand the complex issues encompassed by the best practice retention model, and the underlying motives affecting organizational retention rates. A qualitative approach builds on existing knowledge while not excluding any new possibilities at the outset (Brannick & Roche, 1997), thus permitting a more in-depth focus on both the retention strategies being implemented in the unique context of the IT industry, and the needs and preferences of IT professionals regarding retention strategy. Second, since the study's research questions are exploratory in nature, an exploratory case study approach was chosen where the basic properties or dynamics of each case contribute to the theoretical model (Cooper & Emory, 1995; Yin, 1994). Specifically, lessons from the cases will develop the best practice retention model, such that congruencies will serve to validate it, and differences will lead to further analysis and possible revisions to ensure a better fit with the needs of IT organizations. Third, a multiple case study approach was selected because it allows for the collection of varied data, leading to more compelling evidence from which more robust conclusions may be drawn (Miles & Huberman, 1994; Yin, 1994). The use of multiple cases adds confidence to research findings, and increases the

reliability of a study because it reduces the likelihood that observed findings are due to the unique characteristics of one particular organization (Miles & Huberman, 1994). The multiple case method helps to ensure the reliability of cross-case comparisons and analysis, since respondents, given that they occupy similar positions, should have access to a similar range and nature of information in their respective organizations, and should have similar needs and preferences regarding retention strategy.

The unit of analysis in this study is the organization. While both HR managers and IT professionals will be interviewed and will respond to questionnaires, the objective is to attain a holistic impression of the state of retention strategies and practices in the Montreal IT organizations being studied, rather than to record the impressions of any single HR manager or IT professional per se (Yin, 1994).

Participants

The participants in this study are four human resource managers and eight IT professionals from four IT firms in Montreal. In addition to serving the author's limited time frame and resources, the selection of the location is a strength of the study because it allows for the development of a Canadian industry perspective in the field of IT. Empirical exploration of the Canadian IT industry is necessary because Canada is currently experiencing unprecedented economic growth in IT provision and services. For example, according to the most recent available data, job growth in this decade has been most significant in professional, scientific, and technical services (up 61%), and two-thirds of this decade's growth in professional, scientific, and technical services has come from the technology sector, namely,

computer systems design services, and computer consulting and support services (Statistics Canada, 1999).

Furthermore, Montreal is currently trying to boost its economy by attracting high-technology industry investment. As a matter of fact, in 1998, the City of Montreal along with the Province of Quebec began an industrial development project specifically targeting IT corporate investment. The Provincial government pledged 360 million dollars in tax credits to IT organizations willing to invest in operating in the Cite du Multimedia complex (Friedman, 1998). The project was expected to create ten thousand jobs in the Montreal area. Also, in mid-May of 2000, the Quebec government announced an additional 1.5 billion dollars in tax incentives to transform downtown Montreal into a North American hub for electronic commerce. This most recent incentive plan is expected to create twenty thousand jobs (Lamey, 2000).

Turnover is a key issue in Montreal because the city has been experiencing a 'brain-drain' of professionals, including IT professionals, to the United States and other parts of Canada (Bryan, 2000; Mackenzie & Swoger, 2000; Martin, 2000). In addition to enriching the current body of empirical literature, the information attained by this study regarding the effectiveness of employee retention strategies is crucial for organizations seeking to invest, or to continue operating in the Montreal area.

Validity

Each case set consists of one HR manager and two technology professionals from each participating case organization, for a total of twelve individuals. Both the HR managers' experiences as well as the needs and preferences of IT professionals regarding retention issues may provide a basis for revisions to the best practice model, and may provide some suggestions for future research in the HR field. The perspective of the HR manager is examined to gain insight into the organizational retention strategies being implemented. HR participants' responses concerning retention strategies for IT professionals, and the challenges inherent in implementing retention best practices are sought to test the congruence of the real world context of the IT industry to the best practice retention model. The perspective of the IT professional is examined to gain information regarding which employee retention strategies are the most effective in terms of shaping the choice to remain within the organizational framework. IT professionals' responses concerning their needs and preferences regarding retention strategy are sought to evaluate the utility of the best practice retention model to the real world context of the IT industry.

Four case sets were selected for this study to permit the acquisition of in-depth information, as well as the triangulation of data required to ensure research quality regarding data analysis (Fink, 1995; Yin, 1984). Furthermore, the selection of four case sets also permits replication, which enhances the external validity of the study. With external validity in mind, two large multinational corporations were selected to enhance literal replication, and two medium sized consulting corporations were selected to enhance theoretical replication (Yin, 1994). According to Whitley (1996), the use of multiple, heterogeneous cases enhances

replication, which helps determine the generalizability of research findings. It should be noted at this point that the seemingly small number of cases is a response to time and financial constraints, as well as a necessary tradeoff of breadth for depth. A choice had to be made between studying a small number of organizations thoroughly, thus effectively addressing all relevant retention issues and perspectives, or more superficially attempting to address a larger number of cases. Since there is no similar empirical research on the topic of employee retention in the IT industry, there is more to be gained by focusing on a smaller number of cases. Essentially, a smaller number of cases allows for the greatest scope of information to be obtained despite the limited breadth of this study, and research quality is not affected due to the objective of analytic generalization which will be attained through replication logic (Whitley, 1996; Yin, 1994). Also, the validity of this study is enhanced because of the use of multiple sources of information in the form of questionnaires and interviews for both human resource managers and IT professionals (Whitley, 1996).

Sampling

At the outset of the data collection process, research was done on the Internet and by telephone to develop the preliminary corporate information needed to determine whether organizations fit into the selected criteria for study participation. Specifically, participant organizations had to be IT organizations with operations in Montreal which rely heavily on the knowledge and skills of IT professionals. Following the initial Internet and telephone research, this author contacted three organizations (two multinational corporations and one consulting firm) to obtain the names and telephone coordinates of HR managers from each organization.

The HR managers were contacted by telephone and asked to provide the names of individuals within the HR department who are accountable for developing and implementing retention strategies for IT professionals. In two of the three cases, the HR manager initially contacted was accountable for retention policy and strategy. In one case, this author was referred to an individual in the HR retention department. Three HR managers accountable for retention policy and strategy for IT professionals agreed to participate in the study at the outset, and stated that they would be able to respond to questions about their organization's retention strategy for IT professionals. In the fourth case, one HR manager contacted this researcher stating that he had become aware of the research from a colleague in another organization, and would be interested in participating. After ascertaining the fit of the organization into the study's requirements, and the ability of the HR manager to answer questions about the organization's retention strategies for IT professionals, he was also selected. It should be mentioned at this point that the last HR manager selected to participate in this study was obliged to refer this researcher to another colleague in the HR department due to his absence at the outset of the data collection process. The colleague was also contacted by the researcher to ascertain her ability to answer questions about the organization's retention strategies for IT professionals before being included as a study participant.

After the selection of the participating HR managers, each HR manager was contacted and asked to provide the names and coordinates of two IT managers in their organizations who would be able to provide names and coordinates of IT professionals in the organizations. Each of the eight IT managers was then contacted by telephone, told that their names had been provided to the researcher by colleagues in the HR department, informed about the research,

and asked if they would consent to providing a list of potential participants from their departments. IT managers were informed that potential IT professional participants had to have been employed in the organization more than one year. This criterion was used so that IT professional participants would be able to provide informed responses about retention programs in their organizations. Five of the eight IT managers responded by providing lists of IT professionals this researcher could contact. The lists totalled eleven individuals.

Two IT professionals from each organization were then contacted, informed about the study, and asked if they would consent to participate. Of these eight individuals, six agreed to participate, and two others from the original list were contacted regarding their participation. Both agreed to participate. The remaining individual on the original list was not contacted regarding participation. After all respondents agreed by telephone to participate in the study, the researcher met with each in person to distribute a written consent form for their signature.

Measures

Data for this study were collected by means of a self-administered questionnaire and semi-structured interviews. Separate questionnaires were distributed to HR managers and IT professionals, and interview questions specific to both groups of participants were drafted. In addition, some information about the organizations and their retention programs and rewards policies was collected using corporate web sites. Preliminary background information on participants is presented below in Table 1. To ensure the anonymity of participants, the organizations have been given pseudonyms.

Table 1
Background Information on Participants

Background Information on HR Managers				
	Alpha-Med Consulting	Beta Imaging	DataCom	Delta Networks
Educational Background in HR:	B.A.; HR diploma	B.A.; MBA	B.A.	B.Comm.; MBA
Number of Years with the Company:	7	3	9	5
Number of Years in HR:	13	6	26	10

Background Information on IT Professionals								
	Alpha-Med Consulting		Beta Imaging		DataCom		Delta Networks	
	IT Prof1 #1	IT Prof1 #2	IT Prof1 #1	IT Prof1 #2	IT Prof1 #1	IT Prof1 #2	IT Prof1 #1	IT Prof1 #2
Educational Background in IT:	B.Eng.: MCSE: CCNA	B.Comp. Sci.: MCSE: CCNA	B.Comp. Sci.: MCSE: CNA: CNE: CCNA: CCNE:	CNA: CNE	MCSE: CCIE: Unix Certified	B.Eng. (Minor Comp. Sci.)	B. Comp. Sci.: MCSE	B.A. CNE: MCSE: Graphics Design Certificate
Job Category	R & D	R & D	Both: R & D and Front-line service	Front-line service	R & D	Front-line service	Front-line service	Front-line service
Number of Years with the Company:	3.5	1.5	1.5	1.25	1.1	2	3	5

Questionnaire: Questionnaires focusing on the main topics of the study were distributed to respondents prior to the interviews, and participants were asked to complete them before scheduling an interview with the researcher. Once questionnaires were complete, the researcher met with each respondent to pick up the completed questionnaire and confirm an interview time. Questionnaires served as a foundation to be built upon during the interview process. Participants responded to general questions in the questionnaires, and elaborated on their answers during the interviews. Questionnaires for HR managers and IT professionals were designed by the author, based on the preceding literature review. To view the questionnaires, readers are requested to contact the author.

The questionnaire for HR managers contained questions about three topic areas:

1. The questionnaire assessed HR managers' knowledge of organizational retention strategies. HR managers were asked which of the six retention best practices are being implemented in their organizations, as well as how the six retention best practices are implemented in their organizations. These questions were of a general nature, and assessed respondents' knowledge of the existence of programs related to the six retention best practices. In addition, HR managers were asked to respond to questions designed to assess their perceptions of the needs and preferences of IT professionals regarding retention strategies.

2. The questionnaire for HR managers also contained more detailed questions about the implementation of the six best practices with the objective of determining whether or not the best practice retention model is being applied according to the standards set forth in the

literature. These questions were designed to provide descriptive information about each organization's retention strategy and practices.

3. The questionnaire for HR managers also contained questions designed to assess the relevance and importance of the implementation barriers cited in the literature on their choice of retention strategies.

The questionnaire for IT professionals contained questions about three topic areas:

1. The questionnaire assessed IT professionals' knowledge of the types of retention strategies being implemented in their organizations. IT professionals were asked general questions about whether or not the six retention best practices were being implemented in their organizations. These general questions mirrored those posed to the HR managers both as a means of ensuring the reliability of participants' responses, and as a means of assessing potential communication barriers between the HR department and IT professionals regarding retention strategies and programs.

2. The questionnaire for IT professionals also contained detailed questions about the implementation of the six retention best practices with the objective of obtaining descriptive information about retention programs and strategies from the perspective of IT professionals. Once again, mirroring these questions with those posed to HR managers serves to ensure the reliability of participants' answers by allowing this researcher to compare the responses of HR managers and IT professionals in each respective organization. The foundation for a

description of the participant organizations' retention strategies and practices was laid with the questionnaire, and further elaborated on in the participant interviews.

3. The questionnaire for IT professionals also contained questions designed to assess the needs and preferences of IT professionals concerning retention strategies in general, and the effect of the six best practices on IT professionals' retention decisions. Also, seven questions were included to assess the loyalty of IT professionals to their organizations. For example, among other things, they were asked what was keeping them loyal to their firm, how many times they had considered quitting, and whether they actively searched for another job during the past year.

Semi-Structured Interviews: Semi-structured interviews were chosen because, according to Yin (1994) and Miles and Huberman (1994), this technique is conducive to the acquisition of the in-depth information required for exploratory case study data collection. Interview questions were designed by this author based on the preceding literature review. Interviews were used to acquire more in-depth information about participants' initial questionnaire responses. This served two purposes. First, the interview served as a verification of the reliability of participant responses to the questionnaire. Any discrepancies between questionnaire responses and interview responses were addressed during the interview to ensure that participants were given full opportunity to accurately convey their opinions. Second, the interview permitted HR participants to elaborate on the implementation of the six retention best practices in their organizations, and permitted IT participants to elaborate on their needs

and preferences regarding organizational retention strategies. As such, the interviews allowed this researcher the opportunity to acquire more in-depth descriptive information concerning the application of the best practice retention model, and the effect of the model on IT professionals' retention decisions. To view the interview guide, readers are requested to contact the author.

In the interviews, HR managers from participating organizations elaborated on the following questions:

1. Whether or not they scrutinize turnover rates among their technology professionals. If so, how? If not, why not?

2. Which factors affect their retention strategy decisions. The interviews resulted in more detailed information regarding the types of retention strategies being implemented, and whether or not they coincided with the best practice retention model suggested in the literature. The interviews also permitted discussion of any additional retention strategies being implemented, and the reasons for their implementation. In addition, the interview provided HR participants the chance to elaborate on the barriers affecting the implementation of the retention best practices discussed in the literature.

In the interviews, IT professionals from participating organizations elaborated on the following questions:

1. Whether or not the best practice methods cited in the empirical literature have the stipulated effect on their decision to remain within the organizational framework. If so, which strategies do they prefer? If not, why do the current practices fail to engender their organizational commitment and loyalty? Also, throughout the interview, participants were asked about their loyalty to their organizations. For example, they were asked to elaborate on why they felt that furthering their career would either involve remaining within the organization or taking a position with a competitor.

2. If the current organizational retention strategies are not satisfactory, then what types of retention strategies would have more of an effect on their decisions to remain within their organizations?

Interviews with all participants were conducted in person, and were carried out by closely following the interview guide so that all HR managers and all IT professionals were presented with the same questions. By ensuring that participants were asked the same questions, construct validity was enhanced such that a chain of evidence was fortified reducing the likelihood that the subjective judgements of the researcher interfered with data collection (Yin, 1994). Also, the semi-structured nature of the interviews provided for the high level of consistency necessary for reliable cross-case analysis (Miles & Huberman, 1994).

Although the interview was semi-structured, interview questions were open-ended, which permitted a wealth of information to be acquired on the topic of retention. Also, to encourage the acquisition of more in-depth information, interview questions were not provided in advance so that participants' responses would be spontaneous. This served to enhance the

reliability of participant responses by limiting their ability to prepare their answers according to those given in the questionnaires.

On average, for both HR managers and IT professionals, interviews ranged from one hour to two and one-half hours. Although the original intention of this researcher was to tape interviews with participants, this was not possible due to participants' concerns regarding anonymity, and their discomfort with the idea of being taped during interviews. As a result, notes were taken throughout the interview, and contents were later transcribed. To verify the accuracy of the researcher and diminish the possibility that a lapse of memory would interfere with a complete set of interview notes, two precautions were taken. First, notes were taken during the interview, which included both body language and specific key descriptive expressions or phrases made by participants. Second, immediately after the interview, more detailed notes were taken while participants' responses were still fresh in the mind of the researcher. In addition, to further verify the accuracy of interview notes, all participants were presented with a written copy of the interview transcript for review. Upon the approval of the interviewee that the transcript represented an accurate description of the interview, the transcript was entered into the recorded case study database.

Since anonymity and confidentiality were concerns for all participating organizations, to protect participants, the names of the organizations and the participants have been omitted in the interview transcripts, data matrices, and throughout the discussion in this paper. This has not compromised the quality of the research in any way because of the use of a rigorous protocol procedure for data collection, which included using multiple sources of evidence, as well as the establishment of a chain of evidence (Yin, 1994). Multiple sources of evidence in

the form of questionnaires and interviews were used, and a chain of evidence maintained so that readers of the case study report will be able to “follow the derivation of all initial research questions to ultimate case study conclusions” (Yin, 1984, p. 96). A case study data base has been maintained by the author containing all relevant documentation pertaining to case study evidence, as well as the circumstances under which the evidence was collected. The case study database for this research project consists of the researcher’s field notes, interview transcripts, coded data, data matrices, and observations regarding the data collection and analysis process. This data base allows for cross-verification of research conclusions. To view the data base, readers are requested to contact the author.

Data Analysis

The general analytic strategy for this study involves analysing data both within and across cases. According to Yin (1994), in a multiple case study, individual cases should be considered as single experiments and their analysis should involve cross-case comparisons. As such, each individual case is discussed and results are analysed. To analyse within each case, a case description is provided for each organization. This summary allows the unique patterns of each case to emerge before cross-case generalizations are made. This is followed by a cross-case comparison involving the analysis of variables which emerged from the data. Cross-case analysis was performed by reviewing the similarities and differences between case sets. This enabled the researcher to compare and contrast the results from interviews and questionnaires across organizations. This author believes that segmenting the data has resulted in a less cumbersome, and more easy to read report.

To increase the accuracy of the data analysis, coding was used to analyse interview data. To decrease the potential of investigator error and to save time, a computer software program called QSR NUDIST was used both to create a coding scheme, and to code the data. Once in coded format, the data was displayed in what Miles and Huberman (1994) refer to as data matrices, which are available for review at the request of the reader. This efficient display of data facilitated the interpretation and analysis of results. Because coding can result in significantly narrowing the field of focus by eliminating some pertinent factors and emergent trends deserving attention (Miles & Huberman, 1994), this author has included an overall case description for each participating organization in the final written case report. Any information, issues or anecdotes deemed relevant that were not adequately brought forth through coding analysis were covered in the case description so as not to curtail the opportunities for further exploration of the topic area by other researchers.

Results

The results of this study will be presented in two main sections. In the first section, each of the four organizations is introduced. The results of the questionnaires and interviews are also discussed on a case by case basis, using the coding system created during data reduction as a structure for presentation. The second section consists of a cross case analysis where questionnaire and interview responses are aggregated and discussed as a means of addressing the study's findings.

Individual Analysis of Cases

Alpha-Med Consulting

Alpha-Med Consulting is a medium-sized consulting firm, providing hardware, software, and network support for clients in the health-care industry. The organization employs 479 individuals, approximately 47% of whom are IT professionals. Of the 228 IT professional employees, 67 are consultants who specialize in providing hardware, software, and network support for clients, and 161 are employed in production, designing and upgrading software and hardware accessories for nuclear gamma radiation equipment. The average age of IT professionals in this organization is 25. The human resource department has six members, with only one member responsible for developing, implementing, and evaluating employee retention strategies for IT professionals.

Founded in 1976, the organization now enjoys a revenue-run rate of \$80 million. Corporate headquarters and manufacturing facilities are in a city in the Northeastern United States. The IT application development facilities, as well as the majority of IT consultants are located in Montreal, Canada. The organization is expected to undergo rapid expansion within the next three years following the acquisition of an American IT consulting corporation.

Alpha-Med Consulting attributes its successful growth to a firm focus on key markets and areas of specialization, combined with an emphasis on customer relationships and adherence to strict quality principles. The organization's primary mission is to provide the

dynamic technology solutions that achieve success for their clients. Alpha-Med Consulting serves two client segments. First, direct technology solutions are provided to healthcare services organizations. The firm serves client health care providers in the north-eastern part of the United States, as well as Montreal, Toronto, Ottawa, Halifax, Fredericton, Calgary, Saskatchewan, Vancouver, and Victoria. The acquisition of the American IT consulting firm is expected to expand the company client base into Mexico and Europe. Second, equipment is manufactured according to stringent quality standards to respect patients' needs for safety and comfort.

The culture in Alpha-Med Consulting is based on a team approach. Rewards are distributed primarily for team accomplishments, and applications and product development professionals work in structured teams. Alpha-Med Consulting demands many things from its IT professionals. For example, IT professionals must have an entrepreneurial spirit, yet be able to work in a team environment, and they must be both creative and able to adhere to rigorous quality standards, principles, and methodologies.

Turnover/Retention

At Alpha-Med Consulting, the total annual turnover rate of 3% among all employees is equal to the annual turnover rate for IT professionals. Although the firm faces tough competition from other organizations in the field for both human resources and client contracts, employee retention rates have continued to increase since 1996. The average retention time of five years for IT professionals in the organization is quite exceptional in the IT industry. Thirty-eight IT professionals have been hired in the past year, and 12 additional

IT professionals are currently being sought. In terms of retention strategies for IT professionals, Alpha-Med Consulting implements the six best practices of orientation, training, career development, motivation, compensation, and feedback/evaluation. It evaluates the turnover rate for IT professionals once per year by doing calculations, and by reviewing the reasons for changes in turnover. Exit interviews are conducted by the human resource manager interviewed for this study to determine IT professionals' reasons for leaving. Both HR managers and senior management are involved in evaluating the turnover rate among IT professionals.

Orientation

The company has a specialized orientation for IT professionals, which consists of a two-week program before commencing work. Alpha-Med Consulting's orientation program is divided into two components. First, IT professionals participate in a general orientation to the organization which includes a description of the organizational framework, policies and procedures. Second, IT professionals participate in an orientation program hosted by the departments in which they will be working. The general orientation program includes realistic job previews which have been designed by the direct supervisors of IT professionals, as well as senior managers, and one member of the human resources department. Realistic job previews are provided to newcomers through interactive discussions with IT professionals who have been with the organization more than one year. Participation in the program includes members of the senior managerial team, one member of the human resources department, direct supervisors of IT professionals, and IT professionals who have been employed in the

organization for more than one year. Orientation at Alpha-Med Consulting features a variety of media, including lectures, interactive discussions, and videos. In the past year, one change has been made to the orientation process. Instead of spending one day at a general orientation seminar, and the remainder of the two weeks within the hiring department, IT professionals now have a two day general orientation seminar, followed by a three day visit to the manufacturing site in a city in the Northeastern United States, followed by a one week orientation to their department.

A unique aspect of the orientation program is the “Party-Hat Relay Contest” wherein new employees are given a crude map of the entire organization and told to pick up various items along the way which are indicated on the map, and which will be presented to them by organization members at various points along the way. The individual who completes the relay with the most items wins an extra four days off during the year. Orientation programs are evaluated once a year by a team which includes senior managers, one human resource manager, and IT professionals who have participated in the program. Survey feedback from IT professionals is solicited to determine their reactions and perceptions to the orientation program.

Perceptions of the HR Manager: In general, the HR manager at Alpha-Med Consulting believes that the organization’s turnover rate among IT professionals is low compared to industry competitors because IT professionals’ suggestions are frequently accommodated at company expense. Furthermore, she believes that turnover has continued to decrease since 1996 because company prosperity has permitted more spending on IT professional retention

incentives. This has enhanced the organization's accommodative environment for IT professionals.

With regard to including realistic job previews in the orientation program, the HR manager from Alpha-Med Consulting stated that it is important to include realistic job previews in the program to "avoid ugly surprises for the individual" which could result in rapid turnover. She stated that realistic job previews are best provided by more experienced IT professionals who can give a more accurate picture of the daily work environment.

According to the HR manager, orientation is the least important of the six best practices in terms of effect on IT professionals' retention decisions because the effect of the program eventually wears off and cannot be continually reinforced. She stated that although it is important to welcome new employees to the company with an exciting, informative program, orientation has little long term effect on IT professionals' decisions to continue working in a company. The HR manager noted that cost/benefit analysis is not used to evaluate the effectiveness of orientation because it is impossible to calculate its effect on the organizational turnover rate for IT professionals. She also stated that the cost/benefit analysis process is unfamiliar, complicated and time-consuming.

Perceptions of IT Professionals: Both IT professionals stated that they enjoyed the site visit to the US because of the opportunity to meet and interact with senior executives there. They indicated that the Headquarters cocktail party with senior managers made them feel valuable. Both respondents also indicated that although the general orientation did not lessen their jitters or uncertainties about their new jobs, once they arrived in their respective departments they

felt more comfortable because department members were friendly and they were able to contribute to the environment quickly. They indicated that their favourite parts of orientation were the departmental orientation where they met new colleagues, and the cocktail party at Headquarters where they met senior managers.

One respondent listed the Party Hat Relay Contest as one of the program components he preferred because he was given the opportunity to meet individuals from other departments, and was rewarded with gift certificates for movie rentals. On the other hand, one respondent stated that he particularly disliked the Party Hat Relay Contest. He remarked that “for months I tried as much as possible to avoid the people I met at the contest because it was so embarrassing.”

They both indicated that they preferred the emphasis in a company orientation program to be on introduction to the department, including meeting team mates, learning about the immediate work environment, and learning about who is responsible for which work issues. They expressed disinterest with company processes regarding policies and procedures having to do with security, safety, hierarchy, and culture. For example, they both indicated that they are least motivated by company processes. One respondent stated that processes have no effect on his effectiveness as a consultant. The other stated that policies and procedures are “meaningless” except for the fact that they allow him to train and be supported in his willingness to learn.

They also indicated that providing realistic job previews to newcomers is fair, although only one said he felt he had received a realistic picture of his work environment and responsibilities. The other respondent stated he had received a “somewhat” realistic picture

because the amount of job stress was downplayed during orientation.

On the other hand, both IT professionals said that they disliked the general orientation session because it took valuable time away from the departmental orientation. One stated that he felt that the information provided in speeches at the general session was “boring and irrelevant”. The other stated that the general sessions made him “nervous” due to the focus on only the negative aspects of working with clients, and the lack of “morale boosting.”

In addition, neither respondent indicated that orientation had lessened their uncertainties about their new job. In particular, one stated that he feels that orientation is another way for “a company to sell itself and test new employees ” before work begins. He said that he feels orientation is the last phase an individual must pass before becoming an employee, and that it is important to ask the right questions at orientation “so you can fit in later.”

In addition, they disliked certain elements of the realistic job previews used in orientation. One respondent disliked the emphasis on the negative aspects of client service, while the other felt that the company did not disclose the whole truth about the amount of job stress he would have.

Both respondents rated the content of the program as “Fair” because it did not provide enough time for departmental orientation, and because the general session reiterated information they had already acquired in job interviews and which was not relevant to their job performance.

Both IT professionals stated that orientation did not change their feelings about the company because it is irrelevant to their work and to how the company treats its employees. In particular, one said that “orientation has nothing to do with my job.” They stated that orientation has no effect on their retention decisions because it has nothing to do with job performance and the ability to build team relationships.

Training

Alpha-Med Consulting also provides specific training opportunities for IT professionals. In-house training is provided for internally-developed software applications and products, and features a wide variety of media, including lectures, interactive discussions, video, role-play scenarios, and computer-based training. In addition, when necessary, application specialists are brought in on thirty day contract assignments to train IT professionals on new products and operating systems. Other training such as required technical certifications, and training for externally-developed hardware, software, and network products is out-sourced. IT professionals are also provided an annual education allowance for any training they undertake independently, and are given time off from work to attend relevant trade shows and product fairs. Training programs are constantly evaluated throughout the year by senior management, a human resource manager, direct supervisors, and IT professionals.

Regarding recent changes to training programs, in the past year, the company has altered the annual education allowance for IT professionals. Previously, IT professionals were given an annual allowance of \$1,800. Presently, the company has decided to match the education contributions of its employees to a maximum dollar value of \$4,000 per year. Also,

three new out-source training providers have been retained in the areas of software design, database applications, and database architecture.

Perceptions of the HR manager: According to the HR manager of Alpha-Med Consulting, training is the second most important best practice affecting IT professionals' retention decisions. She stated that she believes training is important to IT professionals because of its effect on job performance.

The HR manager said that feedback is constantly solicited from IT professionals about training needs, both from surveys and from regular interactions between IT professionals, the HR department, and IT managers. Training needs are prioritized and provided on an as-needed basis. She noted that communication takes place regularly about training because training is critical to effectively providing client service and that surveys are distributed "when there is confusion about whether certain programs should be included or excluded."

Since there are so many training requirements for the many different types of IT professionals in the company, some sacrifices need to be made in some departments to accommodate others. According to the HR manager, some departments are given more training than others because of the "need to prioritize requests on the basis of urgency." Usually, consultants in the field are given priority over those working in production and design because their needs are more immediate. The HR manager also stated that some less urgent training requests are put on "the back burner" due to limited funding. She noted that it is getting more difficult to keep up both financially and procedurally with rapid technological advancements. So, some IT professionals are expected to train independently.

Perceptions of IT Professionals: Both respondents indicated that training is the most important of the best practices for their retention decisions. As a matter of fact, one stated that access to training is the single most important factor keeping him loyal to Alpha-Med Consulting right now. They both indicated that concern for their training needs has the most significant effect on their decisions to continue working in a company because skill development is necessary for survival in the field. One respondent stated he is most motivated to continue working in a company that provides training because it is “necessary for survival” in the world outside the company. Training is critical to their retention decisions because they have to be aware of technological developments, and constantly upgrade their skills. The IT professionals expressed a preference for access to practice labs, and other training materials within the company for convenience. In particular, one said that he believes it is important to “have as many learning materials, workshops, and computer labs as possible in the company where they can be easily accessed.”

The IT professionals indicated that they liked the availability of the HR manager to answer questions about training, and the speedy follow-up on their training needs and requests. They both expressed a preference for in-house training workshops for convenience and comprehensiveness, as well as for the intensive training focus and the knowledgeable instructors. In addition, one liked training independently on the library database, while the other said that he liked being able to perform market research at technology fairs to focus his project objectives and compare progress with others in the field.

There were, however, a few complaints about training. One respondent noted that he finds the long wait to attend workshops at outside training centres “frustrating.” The pressure to immediately certify after training workshops is stressful and it is difficult to manage the certification workload during this respondent’s client assignments. In addition, he feels he is asked to provide too much feedback to the HR manager about training programs that are not pertinent to him. The other respondent expressed a dislike for role-playing because he finds it “boring and a waste of time to discuss issues that may never surface at a client site.”

Career Development

Alpha-Med Consulting provides career development opportunities for IT professionals. Career development programs are created by a human resource manager, and a group of IT professionals. Senior management, a human resource manager, direct supervisors, and IT professionals actively participate in career development programs. The company possesses an internal database of IT professionals who are both willing and able to be moved either horizontally or vertically in the organization. This career development database is kept by the human resource department, and internal movements of IT professionals in the organization are tracked and appended to the career development database. Alpha-Med Consulting uses self-assessment mechanisms, counselling, mentoring, and skills inventories as part of its career development strategy for IT professionals. The organization’s career development programs do not include the use of psychological testing or job rotation for IT professionals. Although IT professionals are not permitted access to the career development database during employment at the organization, they are encouraged to solicit feedback from their direct

supervisors, and from the human resource department concerning internal career alternatives, and to provide their feedback concerning their career objectives and aspirations.

The organization holds a “Career Day” event once a year to promote career development for employees. All employees, including senior managers, human resource professionals, direct supervisors, and IT professionals are invited to spend some time during the day visiting other departments to get informed about new projects and possible internal employment opportunities. This organization emphasizes performance over seniority for promotion. Career development programs are annually evaluated by a team including senior managers, a human resource manager, direct supervisors, and IT professionals for the purpose of reviewing the internal flow of employees in the organization. Career development program effectiveness is evaluated based on the frequency of program use by IT professionals, as well as the by the success of IT professionals at being placed in other jobs within the organization. Survey feedback from IT professionals is solicited regarding their perceptions of, and reactions to, the career development programs they have participated in.

Perceptions of the HR Manager: During the interview, the HR manager mentioned that it is important for the organization to maintain an internal database containing information about IT professionals’ career development potential as a means of tracking the flow of the internal labour supply.

She also discussed three issues affecting career development programs at Alpha-Med Consulting. First, she said that communication about career development programs to IT professionals occasionally suffers because only she is responsible for all retention strategy

duties. Limited time and other organizational priorities requiring her attention affect the flow of information.

Second, although psychological testing was once used as a means of determining suitability for promotion, the HR manager stated that she now believes it is not a good predictor of future job performance. Specifically, she remarked that psychological testing is no longer used as a component of the organization's career development program because it is "unethical, impractical, and irrelevant to future job performance."

Third, the HR manager mentioned that job rotation is not used in the organization because it is "just common sense" that IT professionals prefer to advance upward in their original field of choice, rather than gain experience horizontally. Therefore, the focus of career development initiatives at Alpha-Med consulting is on the attainment of managerial promotions.

Perceptions of IT Professionals: Both respondents indicated that career development is important to their retention decisions because, although they do not actively participate presently, they will later on in their careers. When asked what they believe is most important to include as part of a career development program, one respondent stated that an open door policy should exist between IT professionals and team leaders since team leaders are most able to provide career development information. The other respondent stated that participation in counselling sessions should be "optional, so people can choose to attend when they have a clearer idea of where they want to go in their careers."

In addition, one IT professional stated that he preferred the discussions with his team leader about career development because he obtains valuable information about what positions entail, both mentally and in terms of skills. The other stated that he preferred the skills questionnaires because they were informative and allowed him to compare himself with other IT professionals in his field. Both respondents indicated that they prefer follow-up (by a mentor or other-wise) support for skill improvement in areas pointed out by the questionnaires.

On the other hand, one respondent stated that he dislikes self-assessment questionnaires because “I’m a grown up. I know what my strengths and weaknesses are without their questionnaires to help me along.” The other respondent stated that he disliked participating in career counselling sessions because he currently does not have any clear career goals. He remarked that he felt that his lack of career goals was being compared to the more defined goals of his colleagues, and that he was being negatively viewed by the HR manager and team leader for not having more clearly defined career objectives. Both respondents indicated that they are not currently maximizing their participation in career development activities and opportunities because they are more focused on gaining work experience at this point in their careers.

Motivation

To enhance the motivation of IT professionals, Alpha-Med Consulting solicits information from IT professionals concerning work environment and process, work content and responsibility, the orientation program, training opportunities, career development initiatives, and compensation and benefits. IT professionals are encouraged to provide

feedback about the factors that motivate and demotivate them when performing their work. Information is provided to the HR manager through formally organized meetings, and through informal conversations which result from sharing work space with IT professionals. One human resource manager, direct supervisors, and IT professionals are involved in acquiring and communicating information about motivation. By emphasizing both a client focus and high-quality standards, IT professionals are constantly reminded of the connection between their work and the attainment of corporate goals through orientation, an open door communication policy, and through contract objectives which delineate the cost of poorly developed or late client solutions. Also, performance feedback is given to IT professionals once every three months by direct supervisors and a human resource manager. Significant team performance issues are also addressed by senior management. Performance evaluation records for IT professionals are tracked in the organization as a means of supplementing career development information.

Perceptions of the HR Manager: The HR manager said that no research has been done regarding the factors that motivate or demotivate IT professionals. She relies instead on her “intuition” and the feedback she acquires informally as a result of sharing work space with IT professionals because there is no time to do research on the factors that motivate them. She believes that bureaucracy is demotivating for IT professionals because the nature of their jobs requires them to produce virtually immediately.

The focus of Alpha-Med's motivational strategy is on compensation, not job design factors that lead to intrinsic motivation. The HR manager believes financial compensation is the most critical incentive for retention. Specifically, she said that "it is just obvious" that the most important factor affecting IT professionals' retention decisions is "the bacon" because of their basic need to provide for themselves and their families. Aside from compensation, other reward strategies are designed according to industry trends.

The HR manager also expressed the opinion that motivational issues are not measurable, and therefore not amenable to cost/benefit analysis because calculations cannot be made concerning the effectiveness of program changes created to boost morale and enhance motivation.

Perceptions of IT Professionals: Both respondents stated that they like their work because of the diversity of experience gained from working on different projects, and the ability to develop skills through training. In particular, one respondent stated that he is most motivated by the chance to work on interesting projects that could shape the future market. They also stated that they feel encouraged by open communication in organizations, as well as by the availability of HR managers and team leads to answer questions in a friendly manner.

Receiving feedback about their performance is important to the IT professionals at Alpha-Med Consulting. One respondent stated that frequent performance feedback is necessary so that he is aware of what his day to day goals are.

Compensation

At Alpha-Med Consulting and at the other organizations in this study, the HR managers described non-financial benefits as part of their compensation packages. Since this is also the case in the practitioner literature, non-financial benefits are discussed in this project as part of compensation plans instead of as part of motivational strategies.

At Alpha-Med Consulting, IT professionals are typically provided a base salary, with bonuses for exceptional individual performance and for outstanding team achievements. One bonus of \$30,000 was given to two team members who completed a software development project under deadline six months ago. IT professionals are also given a comprehensive insurance plan, education allowances, profit sharing opportunities, paid vacation time, and the use of corporate expense accounts for on-site client visits.

In terms of non-financial benefits, Alpha-Med has a flexible hours policy for its IT professionals. Core business hours at the company are from 9:30AM to 3:00PM. Most IT professionals must work an eight hour day, but the hours they work outside core hours are their choice. Also, this company has a casual dress policy. IT professionals are permitted to wear casual attire to work unless clients or senior managers from headquarters are expected. Employees have a choice of benefits as well. For instance, they choose whether or not to participate in the corporate insurance plan, and in corporate gain-sharing opportunities.

To accommodate them when personal situations arise that interfere with their ability to be at the office, telecommuting is provided to certain IT professionals. In the future, it is expected that all IT professionals will be provided the option to telecommute when necessary, however, currently, access to telecommuting is restricted to occasions of necessity.

At Alpha-Med Consulting, compensation and benefits programs are evaluated once a year by senior management, and members of the accounting and human resource departments. The evaluation process includes survey feedback, but only regarding non-financial benefits. The salary evaluation process and all financial compensation decisions are confidential, and IT professionals' opinions about those issues are not solicited. In the past year, there have been no significant changes to the compensation and benefits plan for IT professionals.

Perceptions of the HR manager: The HR manager expressed her perception that the most important incentive affecting IT professionals' retention decisions is money to provide for themselves and their families. She stated that quality of life and an interesting job are also relevant, but money is always the "bottom line" of a company's retention strategy for all types of employees. She stated that a company "can offer all the perks, but if it doesn't have a generous compensation plan, it won't succeed in controlling turnover." According to the HR manager, this is especially true in the case of IT professionals who realize they are in high demand and expect companies to provide generous compensation packages.

The HR manager also noted that although the company is experiencing growth, nevertheless resources are limited and it is becoming more difficult to keep up to speed with competitors' salary packages. In addition, inflated benefits packages in the marketplace have resulted in IT professionals expecting a variety of workplace benefits. She stated IT professionals are also making more requests for such benefits. For instance, there have been requests for an internal childcare facility, but the cost of developing such a facility and of hiring qualified staff is too high to accommodate the requests. As well, the legal ramifications

of any mishaps regarding the children on company premises are enormous. With regard to job security as a non-financial incentive, the HR manager noted that it has the least effect on IT professionals' retention decisions because "people concerned with stability don't join consulting firms."

Perceptions of IT Professionals: In terms of financial benefits, one respondent indicated that he preferred a "good salary" and paid vacation, while the other stated that he is most motivated by quality of life benefits that give him "time to enjoy hobbies and life outside of work." The latter respondent also expressed a preference for the educational allowance to be able to train in outside fields of interest, as well as for the insurance plan. Both IT professionals stated that they are motivated by rewards that include performance bonuses because they increase "the hunger to get the job done", and they encourage people to be accountable for solutions instead of taking credit for others' work.

Although it is very important to their retention decisions, both IT professionals said that financial compensation is not as important to them as training. One respondent stated pay "can be sacrificed" for the opportunity to learn. The other respondent stated that financial compensation is of lesser importance than acquiring job experience and having a good quality of life.

In terms of non-financial benefits, both IT professionals said they preferred flexible hours for independence and to participate in activities outside of work. In addition, one expressed a preference for being able to attend technology fairs, and for participating in decision-making for projects and training.

They also listed flexible hours as the most important aspect of a compensation and benefits plan. One respondent listed training and quality of life benefits as the most important components as well. Besides being the most important part of a compensation package, both IT professionals stated that flexible hours are one of the most important incentives an organization can use to maintain the loyalty of IT professionals. One respondent also said he liked the challenge of an exciting job with high responsibility. The other respondent also listed vacation time for better quality of life, and telecommuting because quiet time working at home increases his productivity. They continually mentioned the positive effect time off has on their retention decisions. One remarked that he needed more vacation time to “relax and have a life.” In addition, one respondent stated he is motivated to commit to an organization which gives quality of life benefits to IT professionals as a show of “respect for the total being.” He also said that he is most motivated by a balance of financial rewards and non-financial benefits because “pay is good everywhere now. I want the job experience and flex hours in a young, productive environment.”

With regard to job security, the responses of IT professionals were similar to those of the HR manager in that it was not seen as an important retention incentive. As a matter of fact, they indicated that job security is least important to their organizational commitment. One said his focus is on gaining experience and working with cutting edge applications and products. The other stated that “worrying about my job means I won’t risk it to create a better product I can be proud of.”

There were very few complaints about the compensation and benefits plan at Alpha-Med Consulting. One respondent stated there is nothing he dislikes about the financial benefits he receives, except that a pension plan is unnecessary at his age. The other stated that the insurance plan is unnecessary, and although the concept of paid vacation is good, he does not actually get a chance to have much time off. He stated that when he signed on with the company, all his colleagues were talking about the fact that “we would all get three weeks off paid instead of just 4%, but I haven’t seen three weeks off a year yet. It was just a [sales] pitch.” As a matter of fact, both respondents indicated that they want more vacation time, and less overtime to unwind. In addition, one respondent stated he wanted to travel less to be able to have “more of a personal life.”

Feedback & Evaluation

In terms of the feedback and evaluation processes, Alpha-Med Consulting evaluates its orientation, training, career development, and compensation programs for IT professionals. Senior managers, one human resource manager, direct supervisors, and IT professionals themselves all participate in the evaluation of retention-oriented programs. Typically, retention strategy evaluation takes place shortly after the end of the fiscal year in December. In the past year, no significant changes have been implemented regarding the overall organizational retention strategy for IT professionals. All retention strategies except compensation are evaluated at least once a year using survey feedback information from IT professionals. Survey feedback is kept for two years by the organization. Cost-benefit analysis is also used to determine the program effectiveness of orientation, training, career development, and

compensation.

Perceptions of the HR manager: The HR manager feels that retention programs are quite comprehensive. She stated that she is proud of the company's efforts to include all levels of the organizational hierarchy in the implementation and evaluation of retention strategies. She stated that the company has managed to stay consistently within budget while other organizations spend on irrelevant retention policies, and reiterated that the company continues to have one of the lowest turnover rates in the industry. However, in terms of feedback and evaluation decisions pertaining to retention strategy, the HR manager also feels that occasionally IT professionals are over-accommodated in their demands. For instance, she stated that if they want to go "have a few beers...and call it a team performance meeting, that's O.K.," and that "Everyone is afraid that they'll walk out if their demands are refused, so they [IT professionals] get away with things other employees wouldn't even dream of asking."

As well, according to the HR manager, survey feedback has not been used to determine the types of reward strategies preferred by IT professionals. Decisions about rewards are made using the intuition of the HR manager, which is the result of years of experience in the HR profession.

Perceptions of IT Professionals: When asked if their company provides opportunities for IT professionals to give opinions, impressions, perceptions or perspectives about company retention strategies, both respondents indicated that they feel this is possible. They expressed a preference for the HR manager and team leaders' availability to answer questions, and their

openness to receive suggestions for improvement from IT professionals.

Both respondents stated that they feel able to influence corporate decisions affecting the retention of IT professionals through open communication with the HR manager and their team leaders. In addition, they feel their opinions about work process in the company are valued due to the open door communication policy.

The ability to provide feedback about company processes is as important to the IT professionals in this study as receiving feedback about their performance. They both stated that the most important aspect of a company's feedback and evaluation program is an open door communication policy so they can provide suggestions for improvement.

Only one IT professional made a negative comment about Alpha-Med's feedback and evaluation process. He made an improvement suggestion regarding early market release of products that has not as yet been implemented. He stated that his loyalty to the company could be affected if the problem is not rectified because he wants to work in a company with a reputation for excellence since his "name is on the project."

In sum, turnover at Alpha-Med Consulting is low. However, to maintain control over the retention of IT professionals, the organization does implement all six retention best practices. Overall, the HR manager is proud of the company's efforts regarding the implementation and evaluation of retention strategies, although she does note that IT professionals are occasionally over-accommodated in their demands. On the whole, IT professionals expressed their satisfaction and commitment to the organization, although they did have a few complaints regarding the content and delivery of retention strategies and programs.

Beta Imaging

Beta Imaging is a multinational corporation that provides a wide variety of IT products and services. Products include desktop and workstation PCs, mobile products, printing and digital imaging, and storage products. Services include networking services, e-service solutions, and business consulting services. Beta Imaging was founded in 1939, employs 86,000 people worldwide, and has more than 600 sales and support offices and distributorships in North America, Asia-Pacific, Latin America, Africa, and the Middle East. Corporate revenues are \$(US) 42.4 billion .

The Montreal branch office significantly contributes to annual Canadian revenues of \$(US)1.9 billion. Founded in 1961, it employs 700 people, and represents all of Beta Imaging's diverse computing, printing, and communications product lines. The Montreal branch office is primarily involved in the sales and service of company products, but also has a research and development operations centre. It is the headquarters of Beta Imaging's French-language telephone support centre, and the French language training centre, and is the largest contributor to IT technical telephone support for company products in Eastern North America. Of the 700 employees at the Montreal branch office, 340 are IT professionals. Ninety IT professionals are involved in research and development for storage and printing products, and 250 IT professionals are telephone technical support service providers for company products. The average age of IT professionals at the Montreal branch office is 25. The total number of staff in the human resources department is 27. Four human resource professionals are responsible for creating, implementing, and evaluating employee retention strategies for IT

professionals.

The Montreal branch office of Beta Imaging has the same mission and goals as the overall organization. Essentially, its mission is focused on the attainment of seven corporate objectives, which are profit, customers, fields of interest, growth, people, management, and citizenship. At Beta Imaging, corporate objectives are believed to be fulfilled when they are realistic and are clearly understood by all employees in the company. The organization seeks to achieve sufficient profit to finance company growth and to provide the necessary resources to fulfill the corporate objectives of becoming the leading provider of e-services and digital imaging products within the next three years. In addition, Beta Imaging seeks to provide products and services of the highest quality and value to customers to gain their loyalty. The organization also strives to increase its participation in the fields of interest that build upon its technologies, competencies, and customer interests to achieve continued growth. Growth potential is only limited by profit and by the ability of IT professionals to produce innovative products that satisfy real customer needs.

To realize the corporate mission, Beta Imaging has set six goals. First, the organization is striving to accelerate growth in its existing businesses. Second, it is focusing on streamlining the existing decentralized organization model to fuel growth opportunities. Third, it is implementing a quality customer service program to integrate all facets of customer service from purchase to technical support on the Internet. Fourth, the organization will strive to gain leverage in the IT market by taking advantage of its strong balance sheet. Fifth, it will use its market leverage to fuel the adoption of next-generation products and e-services. Sixth, the organization will strive to build the capacity to provide systems of e-services including

industry partners to fully realize market growth.

Turnover/Retention

The Montreal branch of Beta Imaging has a low overall turnover rate of 10%. However, the organization's turnover rate of 48% among IT professionals is high. The organization is experiencing a high level of competition for its IT professionals from other organizations in its field. Competing organizations are multinational corporations with a capital base to invest in acquiring high performing IT professionals. Since 1996, turnover among IT professionals in the Montreal branch office has increased. According to the HR manager, no one knows why the turnover rate among IT professionals continues to increase, although she believes it is due to competition with another multinational corporation whose headquarters are within walking distance of Beta Imaging. In particular, she believes salary competition with the other multinational corporation to be the main cause of the high turnover rate.

The average retention time for IT professionals at Beta Imaging is one year. Last year, the organization hired 130 IT professionals to fill various positions, and this year, it is seeking 117 more. The human resource department at the Montreal branch office has confirmed that most new positions are the result of turnover instead of growth. They estimate growth hiring to be at approximately 3% currently. Enhancing the retention rates of IT professionals is considered a critical issue presently by both senior management and the human resource department. According to the HR manager, the turnover rate is under constant review by the HR department and senior management at Headquarters. Once per year, a strategic planning meeting takes place to determine the direction the organization will take in the coming year

concerning enhancing the retention of IT professionals. Participants in the strategy meeting include senior managers from Montreal and Headquarters, members of the HR department, and IT managers.

The overall retention strategy of Beta Imaging is to help IT professionals share in the company's success through profit-sharing options; to provide employment security based on performance; to create an injury-free, pleasant and inclusive work environment that values diversity and individual contributions; and to help them gain a sense of satisfaction and accomplishment from their work. Evaluation of the organization's overall retention strategy takes place at the annual strategy meeting where company retention strategies are compared to those of competitors, and discussions take place about how to emulate competitors' strategies to create and maintain a more stable workforce.

Orientation

The Montreal branch office of Beta Imaging does not provide a formal orientation program for its IT professionals or for any other employees.

Perceptions of the HR manager: According to the HR manager, orientation has the least effect on IT professionals' retention decisions. Compensation, work environment, and job performance success are the real predictors of IT professional retention. Orientation is "just a tax write-off," and is not worth the expense. Essentially, she said that because IT professionals tend to leave so quickly, an orientation program will have no effect other than increasing corporate expenses. As well, she noted that due to the high turnover rate and the

constant demand for IT professionals, there is no time to orient new IT professionals at Beta Imaging.

Perceptions of IT Professionals: Both respondents expressed disinterest in learning about company processes regarding policies and procedures having to do with security because such processes are irrelevant to their work. However, they did not state that they would prefer not to have participated in an orientation program. As a matter of fact, although they rated orientation as having the least effect on their retention decisions compared to the other best practices, they did state that an orientation program would decrease the stress of having to meet new colleagues without a formal introduction. For example, one respondent said that a formal “orientation is not that important, but it does mean something when a company makes an effort to welcome you to the ranks.”

Training

Training programs for IT professionals are provided when necessary both within and outside the organization, and include lectures and computer-based training. Training needs are assessed by the human resources department and IT managers. When necessary, experienced IT professionals are asked to lecture less experienced professionals on unfamiliar products. Classroom lectures are also given in the organization, and typically last one day.

The organization has an internal technical library and computer lab facilities to provide IT professionals with access to information and practice on company products. The technical library includes reading materials and product critiques for all products being

supported by the call centre, as well as software development ratings and hardware compatibility requirements. IT professionals are free to use the technical library at any time during the work day, but materials must be kept on the premises for security reasons. Lab facilities are open twenty four hours a day, and can be accessed by all IT professionals who have security clearance.

IT professionals are expected to upgrade their technical product certifications, and training in this area is done at out-sourced training facilities. IT professionals enroll in certification courses independently of the organization and, if and when certification exams are passed, they are reimbursed for passed exams only. In addition, education allowances are given to IT professionals purchasing company desktop PCs up to a maximum of \$500. IT professionals are also permitted two “personal development days” per year to attend technology events so that they may maintain up-to-date knowledge of market developments in their fields of expertise.

Training programs are evaluated approximately once every three years at Beta Imaging by 4 human resource administrators, IT managers, and IT professionals. Typically, evaluation involves a consultation between IT managers and their subordinates concerning the need for certain programs or materials and the effectiveness of current facilities. The consultation is followed by a meeting between IT managers and human resource administrators. Survey feedback instruments are also used to inquire about the effectiveness of current training facilities and programs, and to ask IT professionals for their suggestions. In the past year, three major changes have occurred with regard to training in the organization. These changes have been the result of discussions between four human resource administrators, IT managers, and

IT professionals. The first change has been the purchase of five new servers for the lab to provide technical service engineers more hands-on experience with company software applications. The second change has been the creation of a lab specifically for research and development professionals to reduce overcrowding. The third change to company training programs has involved forming partnerships with two additional testing centres to provide all IT professionals the chance to expedite their certification upgrades. Changes to training programs and facilities are communicated to IT professionals by HR administrators and IT managers at department meetings.

Perceptions of the HR manager: The HR manager at Beta Imaging mentioned three issues regarding training. First, she discussed her point of view regarding increased training investment. She stated that increased investment in training will not result in controlling turnover, but instead will most likely improve the return on investment of competitors because “we train them [IT professionals] so they can leave and make others profitable at our expense.” Second, she said that there were other components that should be included in Beta Imaging’s training program. For instance, she noted that besides classroom lectures, computer-based training workshops should be included, with more experienced staff serving as mentors to teach less experienced staff about unfamiliar company products. However, she also said that corporate headquarters would not approve the expense because of current cost reduction measures.

Third, at Beta Imaging, cost/benefit analysis is not used to determine the effectiveness of training programs due to other organizational priorities. The HR manager stated that there is “no time to start worrying about that.” She feels that as long as the company is keeping track of competitors’ strategies and trying to match them, it is on track.

Perceptions of IT Professionals: Both respondents indicated that training has a very important effect on their retention decisions because access to training affects their work performance and their ability to remain marketable outside the organization. As a matter of fact, one respondent said that the reward he most values is training on new products.

When asked what is most important to include as part of a training program, one respondent indicated that he prefers up-to-date information on company products, as well as access to hands-on lab practice. The other said that including IT professionals in decisions about their training is the most important aspect of an organization’s training program. In terms of training method, one preferred classroom lectures because they are informative and combine theory with practice. The other prefers the lab facilities for training, which are less crowded since the addition of the five new servers.

On the other hand, there were a few complaints about training programs at Beta Imaging. Both respondents stated on the questionnaire that they are only “somewhat aware” of all training programs/opportunities available to IT professionals. They said that most of their information about what is available in terms of training comes from their colleagues at work, and that there is very little communication from the HR manager about anything other than certification requirements. One IT professional said, “she’s [the HR manager] only

interested in what tests you've passed.”

Both respondents also expressed their displeasure with the fact that they must train to keep their positions by continuously upgrading their certifications. In particular, one respondent stated he had been told by his IT manager that failing more than two exams would result in his being fired. When asked which training program components they dislike, one respondent expressed a dislike for the pressure to constantly certify, and both said that service at test centres is slow.

The respondents stated that training programs at Beta Imaging are not tailored to their needs. One stated that his suggestions have not been implemented or followed up, and expressed that he feels surveys are ineffective because no one follows up on the feedback provided. The other stated that more up-to-date materials are required in the library and lab, and reimbursement for training purchases should be provided. Both respondents expressed the need for access to new products in the lab.

On the questionnaire, both respondents indicated that they do not feel their company is allowing them to learn about the latest products and developments in their field. One respondent stated that he makes his own opportunities in this regard by performing “house calls on the sly” for clients. The other stated that the lab facility is outdated, that he is not able to get time off to attend technology fairs, and has had to resort to “e-mail chains” with colleagues to keep current.

Career Development

Beta Imaging also provides career development opportunities for IT professionals. The programs are created by four human resource managers and IT managers. The four human resource managers, IT managers, and IT professionals also actively participate in the career development programs. Shortly after being hired, new IT professionals are given psychological tests to determine their potential for promotion to the managerial level. The tests are administered by human resource managers, and are designed to assess candidates' leadership, interpersonal, and stress tolerance levels. Counselling is then used as a means of interpreting and informing them about their scores. IT managers also routinely distribute skills inventories to determine the need for product certification upgrades.

At Beta Imaging, IT professionals' performance records, including the results of psychological tests, are reviewed by human resource managers and IT managers to determine candidates who may be eligible for promotion. High performers with seniority are targeted and invited to a meeting with their IT manager, and made aware of any available opportunities. If candidates express interest in the promotion opportunities, they are referred to human resource managers, who then provide them contact and application procedure information. The career development potential of the individual is confidential. If a candidate is suitable for promotion, he or she is notified when a position becomes available. All IT professional promotions are recorded in employee files as changes to status so that compensation and benefits changes can be applied. Also, both vertical and horizontal movements of IT professionals in the organization are tracked so that new managers can be on record as mentors for new IT professionals entering their original departments. This mentoring relationship with incoming

IT professionals can last up to two years.

Career development programs are evaluated approximately once every three years by four human resource managers, and IT managers. Evaluation consists of determining the managerial promotion quota. Essentially, HR and IT managers must ensure that there are enough IT professionals left after promotions have been awarded to work directly with clients in a technical capacity. Occasionally, due to high turnover rates, the promotion assignments of some IT professionals have to be postponed as a result of the lack of staff in technical service and research positions. Survey feedback is not used to acquire information about career development programs because it is believed to be of no use, and decisions about managerial promotions are confidential.

Perceptions of the HR manager: According to the HR manager, the HR department has chosen not to acquire feedback from IT professionals regarding career development because decisions regarding a candidate's suitability for promotion are confidential, company decisions. IT professionals only participate in the process after they have been selected for promotion. Before that, she said that their feedback is of no use because they will provide answers that make them seem suitable for promotion even if they are not. According to the HR manager, career development is "not some partnership agreement between the company and employees." It is a way to select high performers for promotion. She stated that if IT professionals require more career development, they will have to "develop on their own."

Also according to the HR manager, increased investment on developing the careers of IT professionals is useless since the turnover rate is so high. Furthermore, when asked if there is anything she felt needed to be included in the career development program, she said that ascertaining that the organization's career development strategy is comparable to that of competitors' is the best way to design a program.

Perceptions of IT Professionals: Both respondents indicated that career development is important to their retention decisions. One discussed the importance of obtaining feedback about his future possibilities, while the other stated that room for advancement and a mentor program are necessary for the maintenance of his company loyalty.

When asked which components of the career development program IT professionals preferred, both respondents indicated they could not comment because they had not participated in any programs at Beta Imaging. As a matter of fact, they said that they feel there are no career development programs/opportunities in the company, and that managerial promotion decisions are based on office politics. One IT professional even remarked that career development in the company has to do with being able to "kiss ass to make management", while the other said that the key to developing a career at Beta Imaging is to "survive office politics long enough to still be around to get promoted." However, when asked what is important to include as part of a career development program, they expressed a preference for mentor programs because they are informative.

On the questionnaire, both IT professionals indicated they would not be able to achieve their career objectives in the company. One said this was because of no time off, continued increases in job stress, and because the company has no respect for how hard he works. The other feels his career is limited in the company due to a lack of communication with the IT and HR managers about potential opportunities, lack of room for advancement, and lack of respect and professionalism. They expressed a dislike for the fact that no one seems interested in discussing their career aspirations and goals with them. They also noted that psychological tests are irrelevant to their career development. One IT professional called the psychological tests used at Beta Imaging “useless” and “stupid.”

Motivation

In terms of strategies to enhance the motivation of IT professionals, Beta Imaging solicits feedback from IT professionals regarding the work environment and work process, work content and responsibility, and training. IT professionals are encouraged by human resource and IT managers to communicate their needs and make suggestions about how the company can improve in the latter areas. In addition, IT professionals at Beta Imaging are informed of the connection between their work and corporate goals because quarterly corporate results meetings are held to discuss department performance and to illustrate the connection between individual productivity and company profit.

IT professionals are given performance feedback once a year by human resource and IT managers. Performance records of IT professionals are tracked to provide information about potential superior performers with management promotion potential.

Perceptions of the HR manager: According to the HR manager, acquiring information about factors that motivate IT professionals is irrelevant because work performance and job tenure are the result of personality characteristics that cannot be changed. For instance, she states it is irrelevant to determine IT professionals' perceptions about stress, since those who can tolerate it will create their own stability and comfort while those who do not will leave the company. Instead of focusing on intrinsic motivational issues which are uncontrollable and personality-based, the organization focuses on productivity issues, which can be controlled.

Perceptions of IT Professionals: In general, an environment which fosters open communication is a motivating force for the IT professionals from Beta Imaging. For example, one respondent expressed a preference for open communication between IT professionals and IT managers where people can make suggestions for improvement.

Both IT professionals also stated they are most motivated by the nature of their jobs. One respondent stated he wanted to be part of the technological revolution, while the other stated he enjoyed playing with "technology toys at company expense". One stated that his main concern is being able to look forward to coming to work everyday in a place where he can contribute to his reputation and company success. The other said that he wants a balance between training, working with cutting edge products, and quality of life.

Both respondents indicated the importance of performance feedback on their retention decisions. For example, one respondent stated that he feels it is important to be able to participate in decision-making, and the other noted the importance of recognition for achievement. They indicated that performance feedback is the most important aspect of a

company's feedback and evaluation program for retention strategy because it results in recognition for work well done, and is an outlet for concerns about the work environment.

Compensation

At Beta Imaging, IT professionals are typically provided a competitive annual salary, insurance plans, and retirement pension plans. Insurance plans include comprehensive dental, vision, life, and disability coverage. Also, in terms of retirement pension, Beta Imaging matches employee contributions to registered retirement savings plans up to a maximum of \$8,000 annually. In addition, IT professionals receive education allowances for the purchase of company desktop PCs up to a maximum of \$800 per year. Profit-sharing plans are available for IT professionals who wish to participate, and IT professionals receive paid vacation time.

In terms of non-financial benefits, the organization has recently adopted a casual dress policy for technical and research departments. Business attire is now only mandatory on days when visits to the company premises by clients and parent company executives are expected. IT professionals are given two weeks vacation per year providing that no urgent situations require them to be at work. In 1999, the Y2K event had many clients concerned with the integrity of their systems, so IT professionals were asked to give up their right to vacation from the period beginning in September 1999 to the period ending in May 2000. In addition, the company provides employee assistance programs for IT professionals experiencing personal crises. Employee assistance programs are available for stress management, marital counselling, and substance abuse.

Compensation and benefits plans for IT professionals are evaluated approximately once every three years by a team including senior management, four human resource managers, and IT managers. The evaluation process emphasizes which benefits to provide overall, and is based on comparisons of the organization's compensation and benefits plan with those of other multinational corporations. Actual salary adjustments and financial investment concerns are handled by senior management and the office of the comptroller at Headquarters. Survey feedback is not used to evaluate compensation plans because the content of those plans is strictly confidential.

Perceptions of the HR manager: The HR manager cited salary as the most important incentive affecting IT professionals' retention decisions, and believes that it is their most valued reward overall. This perception is based on exit interview findings of pay being cited more frequently as the reason for IT professional turnover. When compared to the other five retention best practices, the HR manager listed compensation as the most relevant to IT professionals' retention decisions. Although she said that higher pay packages are necessary to enhance the retention of IT professionals, she also noted that cost cutting measures are preventing this due to the belief of senior managers that increased pay will increase expenses while not positively affecting retention rates.

In terms of non-financial benefits, she said that there have been requests for telecommuting, but the company cannot currently implement a program because setting up remote office connections is costly and compromises the security of client databases.

The HR manager also stated that survey feedback regarding the compensation and benefits plans is not solicited because of the company policy of confidentiality. As well, cost/benefit analysis is not used to evaluate compensation programs and processes because of the HR department's accountability for other organizational priorities.

Perceptions of IT Professionals: Both respondents indicated that they are more motivated by non-financial benefits than financial rewards. In terms of the importance of financial compensation to their retention decisions, one respondent stated it is not as important as quality of life, and that he would "take a pay cut to have weekends off." The other stated that pay is not as important as a professional environment with open communication between the administration and staff, and the chance to learn new products. When asked about the most important component of a compensation plan, one respondent discussed guaranteed time off and paid vacation. The other discussed more time off, having less long work weeks, and flexible hours.

With regard to preferred financial rewards, both respondents stated they prefer "good pay." One expressed a preference for salary and stated other monetary incentives are of no use to him. The other expressed a preference for paid vacation, although he does not get a chance to take advantage of it because he has no time off. On the other hand, they both expressed a dislike for insurance and registered retirement savings plans. One said that he would prefer performance bonuses instead of insurance and pension, which he feels are unnecessary. Also, one respondent stated he does not like being pressured to buy stocks, while the other expressed a preference for stock options, which give IT professionals a stake in corporate success.

With regard to non-financial benefits, both IT professionals expressed a preference for time off. As a matter of fact, both stated that they are dissatisfied with the types of rewards in the company because they have no time off. One respondent said he is dissatisfied because there are no quality of life benefits, work weeks are too long, and he has had no vacation. With regard to their most valued non-financial benefits, one respondent indicated that he most values weekends off, while the other stated that he most values training on new products as a reward. Also, they expressed a preference for casual dress policy because of the wardrobe cost savings.

On the other hand, one respondent expressed a dislike for employee assistance programs and stated he would never participate because they are “just an excuse to get the dirt on people to fire them.” The other complained about being tied to work constantly by a cellular phone and a portable computer. They both stated that quality of life is most important to their organizational commitment because having a personal life outside work permits them to rebuild their productive energy. As well, neither respondent reported being motivated by job security as a non-financial incentive. One stated that both tactful discipline and job security are irrelevant to his retention decisions. The other stated that job security is least relevant to his retention decisions because jobs are easy to find.

There was disagreement between the IT professionals at Beta Imaging about whether they are more motivated by a company in which rewards are equally distributed or one in which rewards are distributed for performance. One respondent indicated that he is more motivated by rewards for performance because he feels that leads to recognition for achievement. On the other hand, one respondent stated he is motivated by equal reward

distribution because it eliminates the contest to get management approval. Likewise, the two respondents from Beta Imaging have different needs that affect their retention decisions. Regarding the need with the most effect on retention decisions, one respondent indicated training as most important, while the other discussed his need for time off.

Feedback and Evaluation

In terms of feedback and evaluation processes, as has been previously mentioned, training, career development and compensation programs are evaluated once every three years at Beta Imaging. Training programs are evaluated by IT professionals, IT managers, and human resource managers. Career development programs are evaluated by human resource and IT managers, and compensation programs are evaluated by senior management, human resource managers, and IT managers. Cost-benefit analysis is not performed to evaluate the effectiveness of any corporate retention strategies for IT professionals due to other organizational priorities which affect the available time of the HR manager. The main thrust of feedback and evaluation of retention strategies at Beta Imaging is the comparison of strategies and programs with competitors to make sure they are similar.

Survey feedback from IT professionals is involved in the training program evaluation process. Evaluation of overall company retention strategy is done once per year, and is the result of survey feedback from IT managers and the participation of senior management, the human resource department, middle managers, IT managers, and IT professionals. Surveys concerning the effectiveness of current training programs, and suggestions for improvement for training programs are available outside the human resource office. IT professionals with

suggestions, recommendations, and requests for training are encouraged to fill out the surveys and hand them in to one of four human resource managers responsible for their collection. Both the human resource and IT managers are responsible for communicating any information regarding retention strategies to IT professionals. Improvements to work environment and training programs which are cited as reasons for productivity improvement are rewarded with bonuses. Significant changes to retention programs are communicated at open company meetings. Once a year, representatives from all levels in the organization are invited to attend a breakfast meeting to discuss “people objectives”, and the best way to create and maintain a stable, productive organization conducive to the retention of high-quality IT professionals. Survey feedback data are not kept by the organization. Beta Imaging conducts exit interviews to determine the reasons for IT professional departure.

This past year, three significant changes have occurred as a result of the involvement of human resource and IT managers, and IT professionals. All three changes regarded training facilities and programs. The first change involved the purchase of new computer systems for the technical support lab. The second change involved the creation of a new research and development lab, and the third change involved increasing the number of external testing centres available for IT professionals requiring speedy certification.

Perceptions of the HR manager: According to the HR manager, survey feedback is not used to determine the perceptions of IT professionals regarding the six retention best practices. The HR manager has limited time to administer such a survey because of other HR responsibilities, and believes feedback about issues other than training is irrelevant to the decision-making

process. For example, survey feedback is not used to evaluate career development programs because promotion decisions are up to IT managers and the HR department. Survey feedback regarding compensation is not solicited due to company policy on confidentiality. Survey feedback concerning factors that motivate IT professionals is not used because it results in increased spending on comfort factors and decreased spending on productivity factors. In terms of feedback and evaluation decisions pertaining to retention strategy, the HR manager stated that she feels that before improvements can be made to the company's retention strategy, the turnover rate must be controlled.

According to the HR manager, cost/benefit analysis is not used to evaluate corporate retention strategies because of other organizational priorities such as dealing with work environment problems, other team projects requiring coordination, and recruitment issues.

When asked if she would like to mention any other strategies or practices Beta Imaging uses as part of a retention strategy, the HR manager stated that she feels that the company has an excellent international reputation, and IT professionals who stay know the effect the company name has on their resumes. Also, the company is in "great financial shape" and provides job security, which is hard to come by in the market today. As well, the company is large, so IT professionals have unlimited opportunities to develop their technical skills.

Perceptions of IT Professionals: There were a number of complaints about the feedback and evaluation process at Beta Imaging. Both respondents indicated that they are not regularly asked to provide opinions, impressions, perceptions, or perspectives about the company's retention strategies for IT professionals. In particular, they indicated that they feel they are not

consulted regarding anything but work content and training. One respondent stated that his “feelings are not considered at all. Ever.”

In addition, they feel that their opinions about work environment and work process are not valued or appreciated. One respondent stated that survey results are not acknowledged, and discussions with HR and IT managers do not result in improvements. The other stated that no one asks his opinion and when he gives a suggestion, he is told to “stop complaining.” As a result, they feel powerless to affect policymaking decisions about retention strategy. When asked how an organization can best demonstrate concern for their needs, one respondent expressed a preference for anonymous surveys whose results are regularly followed up.

They also feel the company makes no effort to include IT professionals in retention strategies targeted towards them. In particular, one respondent discussed the lack of follow-up on feedback, the lack of recognition for achievement, and the lack of communication between IT professionals and IT and HR managers.

Finally, when asked about their loyalty to Beta Imaging, neither participant said they were committed to the organization. As a matter of fact, one respondent said the company name gives him leverage in the job market when he makes applications, and the other stated that nothing is keeping him loyal to the company.

In sum, the turnover rate at Beta Imaging is high and enhancing the retention of IT professionals is considered a critical issue for the organization. Beta Imaging has chosen not to provide IT professionals with a formal orientation program, but does implement the other five retention best practices. The HR manager noted the challenges faced by the organization in its attempt to design and implement retention strategies that are comparable to competitors,

and that produce significant return on investment while not inducing turnover. On the whole, IT professionals expressed their dissatisfaction and lack of commitment to the organization.

DataCom

DataCom is a Canadian multinational corporation providing a variety of products and services, including network architectures, network services planning, system design, digital signal processing, compression technologies, radio technology, speech recognition, high-speed electronics, optical components, and security encryption. DataCom has two main lines of business that facilitate product and application development, and contribute to customer solutions. First, it specializes in providing enterprise solutions for IP data communications in businesses of all sizes. Second, it is striving to develop e-commerce by creating a single point of accountability and contact for internet service carriers and service providers of all types.

The company was founded over one hundred years ago, currently employs 73,000 people worldwide, and has offices and facilities in Canada, United States, Europe, Asia-Pacific, Latin America, Africa, and the Middle East. DataCom enjoyed \$21.6 billion in revenue in 1999, of which approximately 10% came from business in Canada. 23, 000 employees of the organization are based in Canada. Of those, 3000 work in and around Montreal. Montreal is home to five of DataCom's offices. Two offices are devoted to research and development. Two offices are responsible for providing pre&post sales support for company products and services. One office is focused on providing client network solutions for both external clients and for all Montreal offices.

The branch office studied for this project is the research and development office with the highest concentration of IT professionals of any Montreal office. This branch of DataCom is responsible for performing configuration and crash research on existing company routing products, as well as for developing new routing products to enhance Internet connection speed and security. The branch office employs approximately 600 people. About 300 are IT professionals directly involved in research and development. The remaining employees are distributed in administrative and sales functions. The average age of IT professionals in this branch office of DataCom is approximately 25.

The branch office studied for this project shares the same mission and goals as the overall organization. The mission of DataCom is to deliver market leadership through customer satisfaction, superior value and product excellence. The organization is devoted to providing a state-of-the-art work environment to support IT professionals' creativity and diverse work styles. One main corporate goal is to double revenues within five years by increasing early market product releases. For instance, one R&D team in the branch office is currently perfecting a security product that will be released to market at the beginning of 2002, and is expected to increase corporate revenue by at least 10%.

Turnover/Retention

The Montreal R&D branch office has a moderate overall turnover rate of approximately 20%. However, the turnover rate of 45% among IT professionals is high. The organization is competing in two main areas for human resources. Primarily, competition from other multinational corporations is resulting in a significant outflow of IT professionals.

However, this Montreal branch is also striving to manage the outflow of IT professionals who transfer to other areas of the parent company. Promotion and travel opportunities abound within the organization, and many IT professionals are taking advantage of the opportunities by transferring to offices in other locations, leaving many vacant product assignment positions to fill. In addition, the positions are hard to fill since they involve specific product knowledge. As a result, the office is rarely able to recruit externally, and is sometimes forced to split product assignments between two or three separate departments to fill vacancies.

Since 1996, the turnover rate among IT professionals has increased steadily. Average retention time for IT professionals in this branch office is one to two years. Last year, approximately 50 IT professionals were hired, and the organization is currently seeking approximately the same number to fill vacant positions. Most vacancies have been the result of a competing multinational opening an R&D facility in Montreal and offering more lucrative pay packages to lure away IT professionals from DataCom. Remaining vacancies are the result of IT professionals taking advantage of the more profitable job market in the United States. Turnover is a critical issue for this branch office of DataCom. It must enhance retention rates of IT professionals to meet its goal of increasing early market product releases.

The overall retention strategy in this branch office for IT professionals is to create an environment where IT professionals are comfortable to work. For instance, the organization provides an open work environment with no walls or desk dividers. Instead, work areas are divided by colour zones, and decor in each area revolves around the colour designation. Each work area has a free cappuccino and fruit juice bar where employees have unlimited access to a variety of beverages and snack items. Each bar has bistro tables and white-glove service.

In addition, the organization has a full-service fitness facility and dry cleaning outlet for employees.

Aside from the unique work environment, the HR department is involved in the effort to enhance the retention of IT professionals. The total number of staff in the HR department is 78. A team of three individuals has been formed for the specific purpose of developing, implementing, and evaluating retention strategies for IT professionals to enhance retention rates. The turnover rate is a constant concern for the three members of the retention team in HR, as well as for senior managers, IT supervisors, and IT team leaders since productivity is being affected by constant team restructuring. As well, the cost of training new IT professionals continually results in lost revenue which cannot be reinvested in new product development. The evaluation of retention programs involves survey feedback. Specifically, three times per year, IT professionals are required to respond to a general satisfaction survey regarding training programs and facilities, career enrichment programs, and individual compensation packages. Survey results are reviewed by the HR retention team and IT supervisors.

Orientation

Orientation for IT professionals is provided by this branch office of DataCom both before and after beginning work at the company . The program is six weeks long, and involves a one week orientation at corporate headquarters covering all aspects of the organizational structure, safety protocol, and the importance of diversity tolerance in the workplace. In addition, while at corporate headquarters, new employees attend comedy night, where

improvisation artists role-play company processes. The second and third weeks of orientation require new employees to participate in product quality workshops, where they are informed about the variety of product testing options available in the organization. Week four requires new employees to attend lectures, watch videos, and participate in discussions about critical product, application, and R&D security. Following the security course, IT professionals must write and pass a security exam to ensure their understanding of the importance of avoiding security breaches. The fifth and sixth weeks of orientation are spent in their respective departments being introduced to team members, and being oriented to their product assignments.

The orientation program is designed by a human resource team of three individuals, and participation in the program includes the team of three HR managers, direct IT supervising staff, and IT professionals working in the organization. Program content includes realistic job previews provided by IT supervisors and IT professionals concerning deadline pressure, long hours, and the centrality of security issues. Orientation program content is evaluated once per year by three human resource managers involved in retention programs, and participating IT professionals. The evaluation process is based on the feedback received from IT professionals. One change has taken place in the orientation program as a result of contributions from the human resource retention team and IT professionals. The security exam was added last year as a requirement for all IT professionals working in the R&D departments.

Perceptions of the HR manager: The HR manager at DataCom stated that he feels the orientation program is comprehensive, and that no expense is spared to provide a thorough “introduction to work life” to incoming IT professionals. He said that realistic job previews are a necessary component of the orientation process because they give IT professionals the chance to make informed decisions about beginning work in the company before company training dollars are invested in them. However, he also noted that orientation has no effect on the retention of IT professionals, and that it is “just something we have to do. It’s textbook.”

Perceptions of IT Professionals: When asked which components of the orientation program they preferred, both respondents indicated they preferred the departmental orientation. In particular, one stated that she most enjoyed the breakfast with colleagues, while the other stated that he most enjoyed receiving his first product assignment. Also, they both stated that they feel the general corporate orientation should be short so that more emphasis can be placed on finding out about their jobs and integrating with work colleagues in their departments.

On the questionnaire, neither respondent indicated that orientation provided them with a realistic picture of their work environment and responsibilities. One described orientation as a “mingling thing”, with more emphasis placed on the social aspects of the work environment. The other stated that he feels the job is more stressful and interdepartmental communication more difficult than he was led to believe during orientation.

There were a number of complaints about the orientation process at DataCom. On the questionnaire, neither respondent stated they felt that orientation lessened their uncertainties about their new jobs. In particular, one stated that orientation made her more anxious because

no one discussed her actual job until the last two weeks of the program. The other stated that he felt that he did not acquire any relevant information about his job during orientation.

Both IT professionals rated the orientation program content as “poor.” One stated that she felt orientation was boring, and sometimes stressful because she was not given complete information about her job. The other felt orientation was purely a social event which was not informative. Neither indicated on the questionnaire that they were given personal attention during the orientation program. They simply watched videos and sat through lectures.

One respondent expressed a dislike for all components of the program except the departmental orientation. She felt the visit to headquarters took her too far from home and said the program emphasized the communication of irrelevant information. She also said that the orientation program made her feel negative about the company because it was too long, and too much emphasis was placed on secrecy instead of on communicating job information. The other respondent expressed a dislike for the site visit, which he deemed “unnecessary”, and indicated that he felt lied to regarding the existence of seamless interdepartmental communication. He also said that orientation did not change his feelings about the company because he was not given any concrete information about his job.

In addition, both respondents indicated that orientation is not at all important to their retention decisions. One feels that orientation is a purely “social event” which has nothing to do with actual company processes. The other said that training and acquiring work experience are most important to her. In addition, both respondents stated that they are least motivated by company process issues regarding hierarchy, security, and safety because they are not relevant to their work.

Training

DataCom provides training opportunities for IT professionals. Video and computer-based training takes place both inside and outside the company. The organization has a multitude of high-technology equipment in libraries and labs for each work area in R&D. A video library for training on company products also exists, and IT professionals are free to borrow video training products for periods of three days to improve their skills.

In addition, computer-based workshops on company products are held in another Montreal branch office of DataCom. Instructors are internal company trainers specialized in training IT professionals on the use and configuration of company products. On average, at least one training workshop takes place per day in the other Montreal office.

Also, IT professionals are encouraged to participate in trade shows promoting company products as company representatives. Any additional education expenses related to work performance are reimbursed up to maximum of 50%. Training programs are evaluated approximately three times per year by the human resource department, direct IT supervisors, and IT professionals. At least three times a year, IT supervisors and IT professionals meet to discuss training needs. Findings are reported by IT supervisors to the HR retention team, who work with them to restructure the programs if possible. In addition, IT professionals are required to fill out general satisfaction surveys three times a year, which require their improvement suggestions for training programs and facilities.

In the past year, two significant changes have taken place with regard to the training opportunities available to IT professionals in DataCom. The first major change involved the creation of a link between the Montreal and Chicago R&D branch offices to enhance coordination of the development of a major product line. IT professionals are now connected through computer networks and video conferencing for communication purposes. The second major change to training opportunities has been the offer to reimburse tuition expenses for IT professionals obliged to participate in external training programs for work reasons.

Perceptions of the HR manager: The HR manager stated that he feels training and new technology are the most important factors affecting IT professionals' retention decisions since "they tend to want to participate in training discussions," and "they're always discussing new products and technology trends." When asked if he feels there is anything that should be included in the organization's training program, he mentioned that a seminar for new IT professionals on the configuration and specs for company products they will be using should be included, instead of having them rely on team members to help familiarize them. However, he stated that such a program is too costly to implement because it would involve repeating the seminars each time IT professionals quit.

Perceptions of IT Professionals: On the questionnaire, both respondents indicated that they are most motivated by training. One wants to learn new things and keep up with changes in her field, and said that training is most important to her organizational commitment because skill development and building a reputation for creating superior products is critical. The other

stated that training is essential for his job performance, and access to new technology is most important to his organizational commitment because he wants to remain current and creative in the area of product design.

Both IT professionals at DataCom indicated that training is the most important of the best practices to their retention decisions. One respondent stated that a lack of training would cause her to leave an organization because it would negatively affect her productivity. She also noted that she feels she must train for self-development to perform well both for herself and her team mates, and that training is the single most important factor keeping her loyal to DataCom right now. The other respondent stated that training is necessary to remain current in his field, and that he would prefer lower pay over few training opportunities. He also said that a variety of training programs for skill enhancement enables him to put up with other negative company aspects such as low pay.

They are both well-informed about training programs for IT professionals. One stated she is “mostly aware” of all opportunities because her supervisor informs her about training issues, and HR sends daily memos about training workshops. The other stated he is “fully aware” of all opportunities because when he applied to the company he informed himself of what was available, and because he asks team members and his supervisor about training issues when necessary.

They also feel that company training programs are tailored to their needs because their training requests are quickly attended to. One respondent expressed a preference for training sessions and lab facilities, while the other expressed a preference for the multitude of available training options. In addition, on the questionnaire, they both rated the training programs they

attended as “excellent” because of knowledgeable trainers. One respondent also discussed the lab facility and training videos as excellent components of the company’s training opportunities.

When asked how the company provides opportunities for learning about the latest products and developments in the IT field, they discussed their participation in technology fairs and conferences. In addition, one also discussed the fact that he works with new products on a daily basis as part of his job requirement.

When asked which training program components they prefer, both IT professionals expressed a preference for the computer lab because it allows them to learn independently at their own speed. One also expressed a preference for the thoroughness of the training sessions. When asked what is most important to include as part of a training program, they discussed the necessity of being trained on all types of products, including those not produced by the company. One said that this is necessary for the development of “crash-proof” products. The other stated that this is necessary for maintaining design creativity.

Although, on the whole, both IT professionals were satisfied with the training opportunities at DataCom, two areas of dissatisfaction were brought forth. First, one respondent indicated that he feels he must train to keep his position because some team members who failed certification exams were fired. He said that he does like the opportunity to learn, but thinks the emphasis on passing exams is “unfair.”

Second, when asked which training program components they disliked, one respondent stated she feels tuition reimbursement is useless because most IT professionals cannot afford to undertake 50% of the tuition expense on their own, so no one uses the reimbursement

option. She also expressed a dislike for the fact that the company does not give training on non-company products.

Career Development

DataCom also offers career development opportunities for IT professionals. “Career enrichment programs” are created by the human resource department, IT supervising managers, and IT professionals. Human resource managers, middle managers, IT supervisors, and IT professionals all participate in “career enrichment activities.” Career development at DataCom involves self-assessment instruments and skills inventories given to IT professionals who are applying for transfer to other organizational departments. Counselling services are available in the human resource department to IT professionals who wish to learn more about opportunities for advancement in the organization. One important career development activity involves the assignment of an experienced mentor to incoming IT professionals after their integration to their product assignments. Mentors are expected to be a source of information regarding career opportunities, work processes, and personal support for new IT professionals. Once a month, after work hours, events are organized for mentors and new IT professionals. The most common event is “Movie Night”, and includes a feature film, and refreshments for participants.

Transfers and promotions within the organization are tracked by the human resource department, and mentors provide information to HR managers on an informal basis regarding the interests and abilities of new IT professionals. Candidates with good performance track records are regularly encouraged to participate in career enrichment activities and programs,

and are informed of their potential to enhance their careers in the organization. Also, information about skills inventories and self-assessment scores is attached to employee records, and is openly provided to IT professionals when they ask. Career development programs are evaluated once annually at DataCom by the human resource department, IT supervisors, and IT professionals. The evaluation process includes feedback obtained from a general satisfaction survey distributed to IT professionals three times a year. Also, one survey specifically pertaining to career development is distributed once a year by IT supervisors. Survey results are reviewed by the HR retention team and IT supervisors.

Perceptions of the HR manager: The HR manager indicated that he feels the mentor program is a unique aspect of the career development program which is well-received by IT professionals at DataCom. However, he also brought up a number of pertinent issues. For example, he noted that there are probably components which should be added to the career development program at DataCom, but there is no time to focus on career development because turnover is so high. Most of his time is spent restructuring and evaluating training programs, and creating new non-financial incentives to “excite” IT professionals, so career development is usually overlooked. Although the HR retention team does make the effort to evaluate the program, they do not pay as much attention to detail as when they evaluate training and benefit programs.

Also, the HR manager does not place much emphasis on the evaluation and improvement of career development programs because, besides the mentor program, all other career development programs may actually encourage turnover among IT professionals. The

HR retention team and IT supervisors believe that career development is “tantamount to shooting ourselves in the foot” because it creates an awareness among IT professionals of their leverage in the job market, and implies that better alternatives are available for them outside the organization. As well, he also said that IT professionals like the variety of moving from company to company gathering money and experience and, as a result, the IT industry today is one in which companies must “learn to manage high turnover” rates.

Perceptions of IT Professionals: Both respondents stated that career development is important to their retention decisions and, on the questionnaire, they indicated that it is the second most important practice affecting their retention decisions. Specifically, one stated that she feels it important to be able to enrich her experience and attain higher levels of responsibility. The other stated it is important to know that a company will support his need to advance his career. He also listed promotion opportunities as one of the most valuable incentives a company can use to maintain his loyalty.

When asked what they feel is important to include as part of a career development program, one respondent expressed a preference for career counselling to learn about advancement opportunities in the company. The other expressed the importance of including a mentor program because such programs are both informative and personalized.

Although both IT professionals indicated the importance of career development to their retention decisions in general, they both complained about the lack of career development opportunities and programs at DataCom. For instance, when asked which career development program components they preferred, both respondents stated they could not answer the

questions because they had not participated in any career development programs. They also indicated on the questionnaire that they are “not at all aware” of all career development opportunities for IT professionals because they are not adequately informed by their supervisors and the HR department. Neither was able to describe any career development programs. One respondent even stated she was not aware of any, and has never discussed her career goals or interests with anyone, while the other reiterated that no one had informed him about such programs. The first respondent also mentioned that the mentor program only exists “on paper” because, although she was assigned a mentor, he is not in her field and does not have access to any of the information she requires. As a result, she has not developed any form of relationship with him.

On the questionnaire, both respondents indicated that they will be unable to meet either short term or long term career objectives in the company due to a lack of advancement opportunities. One respondent expressed that he feels the company places too much value on travel and office politics for promotion. They both discussed job stress, lack of vacation time, and feeling unappreciated.

Motivation

DataCom’s strategy to enhance the motivation of IT professionals focuses on the provision of extrinsic incentives, instead of on job design factors that lead to intrinsic motivation. IT professionals at DataCom are aware of the connection between their work and the achievement of corporate goals because of their assignment to particular product development groups.

Performance feedback for IT professionals occurs three times per year in DataCom, and is provided by IT supervisors, middle managers, and the human resource department. Performance evaluation records are attached to employee records, and are used to provide information for salary evaluation, as well as for promotion and departmental transfer decisions.

Perceptions of the HR manager: When asked about the most valued reward for IT professionals overall, the HR manager said that “obviously money is most important for all employees,” although he also stated that because IT professionals value technology, it should be used as a reward when possible to reinforce good behaviour. He also noted that tactful discipline is least important to IT professionals as a reward because of their informal work environment where “protocol and political correctness” do not apply.

When asked why the HR retention team does not attempt to acquire information about IT professionals’ needs concerning work environment and work content, the HR manager indicated that feedback about work environment is a “waste of time and financial resources” because it is already well-designed. He also stated that soliciting feedback from IT professionals about work content is irrelevant because it is designed by IT supervisors and is “non-negotiable.” With regard to motivation, he stated that no effort to determine IT professionals’ needs is necessary, since it is obvious that money and technology are the most critical motivational issues for them.

Perceptions of IT Professionals: Both IT professionals in this study discussed the necessity of performance feedback, although one said it should not be given too frequently. They also discussed the importance of participation in decision-making, and one respondent discussed the importance of recognition for a job well done. The other noted the importance of a team environment for all work issues, as well as a preference for discussions instead of anonymous surveys to increase the level of individual accountability. Also, one respondent stated that gaining experience with challenging projects and achieving a high level of responsibility is a motivating factor, while the other discussed the importance of interesting work with training opportunities, and the ability to get along with team mates. Overall, both respondents indicated that they are motivated by a work environment that fosters open communication.

Compensation

DataCom provides IT professionals with a base salary, and performance bonuses for products which achieve early market release status. This status is declared by senior management at corporate headquarters. In addition, the organization offers insurance plans to IT professionals wishing to contribute, and registered retirement savings plan contributions are matched by the organization up to a maximum of \$5000 per year. The organization reimburses IT professionals up to 50% for tuition and education expenses that are proven to be work-related. All IT professionals have paid vacation, including newcomers. Also, when required to travel to other branch offices, they are provided full access to corporate expense accounts which can be used for lodging, food, and entertainment purposes during the trip.

In terms of non-financial benefits, DataCom has an open work environment including cappuccino and fruit juice bars, cafeteria, dry cleaning facilities, a full service fitness centre, and day care centre. Casual dress policies are in effect for all R&D work areas in the organization, and telecommuting options are provided for certain IT professionals upon request, as is extended parental leave. In addition, throughout the year, various company outings are held which are open to all employees including IT professionals. Sugar shack excursions are held throughout the Spring, as well as company ski trips. All outings are either free, or provide employees a discount on entry fees. Family days are held once a year and IT professionals are invited to bring spouses and children to work during the day to participate in various sporting events. Also, IT professionals are provided a third year anniversary package including dinner, and entertainment at the location of their choice.

Compensation and benefits plans are evaluated once per year by the human resource department, and IT supervisors. Specifically, the human resource department is mandated to perform annual salary evaluations for IT professionals. The human resource managers accountable for retention policies are involved in annual discussions with IT supervisors regarding benefits packages and corporate events. In the past year, there was one change to the benefits offered to IT professionals which involved the addition of the anniversary package to IT professionals working in the company for three years.

Perceptions of the HR manager: According to the HR manager, IT professionals are most motivated by money, and money is the most valued reward for them. To enhance retention, IT professionals should be paid more, but increasing financial compensation would be too

costly, so the organization focuses on creating innovative benefits plans instead. The HR manager at DataCom discussed the creation of the virtual R & D team as an example of an innovative benefit that he believes could lead to a new form of retention strategy in the IT market.

He noted that IT professionals use the company reputation to achieve leverage in the job market, and the capacity to demand better pay packages. In turn, once they apply elsewhere, the organizations “snap them to the front of the line” in terms of selection because their experience is so relevant. Because they have passed DataCom’s rigorous selection process, the other organizations know that they are exceptional candidates.

Perceptions of IT Professionals: Both respondents indicated that compensation is important to their retention decisions, but not as important as training. In particular, one stated that he would sacrifice high salary for good training and benefits programs. On the questionnaire, they both rated compensation as the third least important best practice affecting their retention decisions.

One respondent indicated that the most important aspect of a company’s compensation plan is a competitive salary and time off. The other stated non-financial benefits which help IT professionals to raise their families, and annual vacation are the most important aspects of a compensation plan.

Also, both IT professionals indicated that they are more motivated by non-financial benefits than by financial rewards. One stated that high salary can be obtained anywhere, but work environment and quality of life are hard to find. The other stated that he prefers quality

of life benefits that allow him to actively participate in family life. When asked in general, which types of non-financial benefits they prefer, both respondents indicated a preference for time off. Specifically, when asked what need an organization can demonstrate concern for that most affects her retention decisions, one respondent stated she feels an organization should have concern for her need to have time off so she can relieve her stress and return to work able to perform better. In the case of DataCom, she believes more realistic product deadlines should be imposed and more time off should be granted. In addition, with regard to preferred non-financial benefits, one respondent expressed a preference for appreciation for effort, and for benefit choice. The other expressed a preference for a comfortable work environment, flexible hours, and telecommuting. Casual dress policy and day care facilities were also mentioned.

When asked which financial benefits they prefer, one respondent stated she does not like the compensation plan because her salary is too low, the insurance plan is unnecessary, and she is not given time off. The other respondent indicated that the insurance and registered retirement savings plans give him some security for his family. In addition, one respondent expressed a preference for salary and performance bonuses, while the other expressed a preference for the daycare facility.

Also, both respondents indicated that they are motivated by a combination of equal reward distribution and rewards for performance. Both stated that a balance of base salary and performance bonuses is preferable because it encourages extra effort and results in recognition for achievement. They feel that rewards are distributed fairly at DataCom. One said that this is because everyone is given the same type of financial rewards. The other stated that rewards are not distributed based on relationships with bosses. Although they believe rewards are fairly

distributed, they are dissatisfied with the types of rewards offered in the organization because they are not recognized for achievements. When asked what they most value as a reward, one respondent stated she most values time off to enjoy her personal life and to release stress. The other respondent stated he most values training to enhance his skills.

On the other hand, when asked about their dislikes regarding compensation, both respondents indicated that they feel the compensation plans at DataCom are not tailored to their needs. One stated that this is because she is not asked her opinions about compensation, while the other stated that he feels his salary is too low.

When asked which financial rewards they least prefer, one respondent reiterated that salary is too low, insurance plans are unnecessary, and she has no time off. The other stated that the company should have full reimbursement for educational purchases. When asked which non-financial benefits they least prefer, they both mentioned that they are dissatisfied with the types of non-financial benefits provided at DataCom because they are not given adequate time off. One respondent stated that daycare and parental leave did not apply to her, while the other stated that he dislikes the fact that flexible hours are not available to all IT professionals. One also discussed her dissatisfaction with the lack of appreciation for work well done, and the lack of benefit choice, while the other also mentioned the lack of telecommuting options during certain phases of the design process.

Also, when asked about factors that least affect their organizational commitment, both IT professionals said that job security is least important. One respondent stated that gaining experience with challenging projects and achieving a high level of responsibility is more important than job security. The other stated that interesting work with training opportunities,

and the ability to get along with team mates are more important issues than job security.

Feedback and Evaluation

In terms of feedback and evaluation processes, orientation, training, career development, and compensation are all periodically evaluated at DataCom. Survey feedback from IT professionals is used as part of the evaluation process for orientation, training, and career development programs. IT professionals are encouraged to provide their feedback concerning the effectiveness of programs, and their suggestions for improvement. For orientation, surveys are given to IT professionals at the end of the program, and respondents are asked to provide feedback regarding the content of the program, and the performance of company representatives during the program. With regard to training and career development, the evaluation process begins with the distribution of surveys by IT supervisors to IT professionals. Once surveys have been returned to IT supervisors, the results are used by the human resource department and IT supervisors to evaluate the programs. Data gathered from surveys is kept for one year. In addition, three times per year, a survey instrument is distributed to IT professionals to determine their overall satisfaction with company retention programs.

Changes to orientation, training, career development, and feedback and evaluation programs are communicated to IT professionals through memos from the human resource department. Evaluation of corporate retention programs for IT professionals involves the participation of the human resource department, middle managers, IT supervisors, and IT professionals. No cost benefit analysis is used to determine the effectiveness of retention programs in this branch office of DataCom. However, human resource managers also conduct

exit interviews to determine the reasons for departure of IT professionals. In the past year, there have been four significant changes to the feedback and evaluation process at DataCom. First, a survey instrument assessing IT professionals' satisfaction with overall organizational retention programs is being distributed three times per year. Second, middle managers have been included in the evaluation process of organizational retention programs for IT professionals. Third, responding to survey feedback instruments is now mandatory for IT professionals. Fourth, IT professionals are currently being asked to participate in discussions regarding non-financial benefit preferences.

Perceptions of the HR manager: According to the HR manager, the effectiveness of retention programs cannot be measured quantitatively because “people issues cannot be measured.” That is why cost/benefit analysis is not an effective means of determining or evaluating the effectiveness of retention programs. Also, the HR manager said that feedback from IT professionals about their compensation needs is not used because of the company policy regarding confidentiality, and the potential for leaks to competitors about compensation strategy. On the questionnaire, the HR manager rated feedback and evaluation as the practice with the third least important effect on IT professionals' retention decisions.

Perceptions of IT Professionals: When asked to list the three most important incentives a company can use to maintain their loyalty, both respondents listed training and challenging or interesting work. One respondent also listed time off, while the other listed promotion opportunities. As a matter of fact, they both stated that training is the most important incentive

for them to remain in a company because of skill enhancement and performance enrichment. Also, they both stated that orientation is the least important incentive for remaining in a company. One remarked that orientation is a purely social event, while the other finds it irrelevant to his work performance. Of the six best practices, both respondents indicated that training is most important for their organizational commitment. One respondent stated that training is the single most important factor keeping her loyal to the company.

With regard to DataCom soliciting their feedback about retention programs, both respondents feel their feedback is considered regarding training. Other mandatory survey feedback is not followed up. When asked if they feel their opinions about work environment and work process are valued and appreciated, one respondent indicated that he feels his opinions are “somewhat valued.” He stated that the work environment is well designed, although he was not consulted regarding the design. He also stated that he is allowed to work independently, although his supervisor occasionally treats his team “like kids.” However, he also stated that when he asks for supplies, he is always accommodated.

When asked which alternative strategies DataCom could implement to improve their sense of loyalty, one respondent stated that more professionalism on the part of her supervisor in terms of including her in social activities would affect her commitment. The other stated that quality of life benefits such as vacation time, flexible hours, and telecommuting would increase his commitment.

On the other hand, there were a few complaints about the feedback and evaluation process at DataCom. With regard to providing feedback about retention programs, both respondents indicated that they feel that other than for training and orientation programs, they

are not asked to provide feedback. Although training surveys are valuable to the HR department, career development and orientation surveys are not because no suggestions have been implemented to improve the programs.

The IT professionals from DataCom feel that they have no effect on policymaking decisions regarding the retention of IT professionals. Both indicated that they feel the company makes no effort to include them in the evaluation of retention strategies targeted towards them because they are not asked for their input about anything besides training. When asked how an organization can best demonstrate concern for their needs regarding work environment/process, work content/responsibility, orientation, training, career development, motivation, compensation, and feedback and evaluation, one respondent discussed the necessity of survey feedback for all programs which is regularly followed up, as well as the opportunity to ask questions and provide suggestions to IT supervisors.

When asked whether they feel their opinions about work environment and work process are valued and appreciated, one respondent stated that she feels her opinions are not valued because when she makes comments, she is simply told “that is the way it is here.” Also, both respondents stated they are unaware of any alternative retention strategies being implemented in the organization that would affect their commitment. In particular, one remarked that the company is focused on training, but “everything else is being neglected altogether,” and “when you reach the pinnacle of training, there is nothing left to keep you here.” He said that nothing is keeping him loyal to the company presently because he has maximized his training opportunities, and is dissatisfied with the work process.

In sum, the turnover rate among IT professionals at DataCom is high, and the organization must enhance retention rates in order to meet its goal of increasing early market product releases. In addition to creating a retention team within the HR department, the organization implements all six retention best practices in an effort to control escalating turnover among IT professionals. The HR manager from DataCom mentioned the effect that high turnover has on the organization's ability to maintain an increased level of investment in all retention strategies and programs. Although quite satisfied with the available training opportunities, the IT professionals did express their dissatisfaction and lack of commitment to the organization as a whole.

Delta Networks

Delta Networks is an IT consulting and systems integration firm. The organization specializes in network infrastructures and the development of integrated Internet and e-commerce solutions. Delta Networks was founded in 1993 and has offices in Montreal and Toronto. During the past seven years, it has provided client solutions in the areas of product acquisition, product integration and support, Groupware development, and network consulting.

In terms of product acquisition, Delta Networks offers transactional website design, hardware purchasing, software purchasing, product service consulting, configuration services, and leasing options. In terms of integration and support, the organization offers telephone support contracts, technological assistance for various hardware product lines, ongoing upgrades, daily back-ups, deleted file recovery, and virus detection. In terms of Groupware

development, it provides planning services, business process analysis, training programs, and specialized application development. In terms of network consulting, the organization provides network administration services, Internet solutions, OS integration, and e-mail solutions. Delta Networks has various manufacturing partnerships to provide customers with high quality, up-to-date hardware, software and network products for their diverse business needs.

Delta Networks has 170 employees, 110 of whom are IT consultants. In Montreal, the organization employs 67 people, 53 of whom are IT professionals. The remainder of employees are located in Toronto. The organization is currently expanding its Montreal office to accommodate a larger sales service team. Customer development teams are also being created to handle large client support issues. The average age of IT professionals in Delta Networks is 25. The human resource department is composed of four individuals whose responsibilities include developing, implementing, and evaluating retention strategies for IT professionals.

The organization's mission has four facets. First, Delta Networks strives to ensure client satisfaction by offering solutions fostering efficiency which enable clients to focus on their own missions. Second, its mission involves optimizing shareholder return on investment. Third, the organization strives to be known as the best solutions people in the business. Fourth, it is focused on developing its human wealth by providing employees with a stimulating and empowering environment. Delta Networks is devoted to providing its clients with up-to-the-minute technical knowledge to ensure their productivity and their capacity to remain competitive in the growing e-commerce marketplace.

In Delta Networks, IT professionals work in customer solution teams geared toward the client solutions being implemented. In addition, 'specialist teams' exist for each area of networking, Web design, and hardware and software. The specialist teams' role is to provide support for IT consultants working on projects outside the organization. IT specialist teams are composed of highly qualified IT professionals who are certified in their fields of expertise and who have at least three years of work experience in the field.

Turnover/Retention

Delta Networks has an extremely low turnover rate among IT professionals. Although the organization faces tough competition from other multinational IT firms, and other IT consulting firms, it has managed to maintain a strong retention rate among IT professionals. Since 1996, the IT turnover rate has continued to decrease because of the organization's proactive approach to fostering a communicative environment based on the comfort and involvement of IT professionals. The 1999 annual turnover rate for IT professionals in the organization is 5%, and the average retention time for IT professionals is approximately 3 years. The overall organizational turnover rate is 10%, so the turnover rate among IT professionals is actually lower than that for employees in general. One IT professional was hired by the organization last year to be part of a specialist team, and six more individuals are presently being sought. Evaluation of retention strategies for IT professionals is based on open communication between IT professionals, client development managers, IT team leaders, and the HR department. Regarding retention strategy, Delta Networks implements all six best practices of orientation, training, career development, motivation, compensation, and feedback

and evaluation.

Orientation

Delta Networks has a specialized orientation for IT professionals, which consists of a one week program before starting work at the organization. Orientation does involve the use of realistic job previews. Participation in the program includes senior management, two members of the human resource department, IT team leaders, and IT professionals from the departments to which the newcomers are entering. The orientation program features a variety of media, including interactive discussions, and videos.

A unique aspect of the orientation program is the “backyard barbecue” for newcomers which is held on the last night of orientation. The “backyard barbecue” is held on the grounds outside the organization, and all IT professionals are invited to attend. In the winter months, the barbecue takes place in a heated tent, and features a live band, refreshments, and baby back ribs, chicken, hamburgers and hot dogs grilled by two corporate executives. The barbecue is a purely social occasion intended to give new IT professionals a chance to get to know company employees on a personal level. One senior manager believes that the work environment should be as comfortable to employees as their home environment, and encourages newcomers to bring their family and friends to the barbecue so that everyone can meet the “members of the company family.”

The orientation program for IT professionals is evaluated once annually at Delta Networks by the human resource department, IT team leaders, and new IT professionals who participated in the program. The evaluation process involves survey feedback from IT

professionals as well as discussions between program participants to determine whether any changes need to be made to the program.

Perceptions of the HR manager: According to the HR manager, orientation is the least important of the best practices on the retention decisions of IT professionals because its effect wears off after a few months in the company. She said that “we can’t repeat the process, so over time the information [conveyed] gets forgotten.” The corporate culture has the most effect every day and although orientation is an introduction to the culture, it is not something that can be “brought home to them [employees] everyday” in the same way that the communication philosophy can be modelled and reinforced.

The HR manager also stated that she has not had any indication from survey feedback or discussions that anything is missing from the orientation program. She said that given the short amount of time they have to provide a wealth of information, the program is quite efficient.

Perceptions of IT Professionals: Both respondents stated that, of the six best practices, orientation has the least effect on their retention decisions. However, they did state that the formal introduction to the organization was appreciated. When asked which program components they preferred, both respondents expressed a preference for the discussions with senior IT professionals and the Backyard Barbeque. When asked which program components they disliked, one respondent stated he liked all aspects of the program, while the other expressed a dislike for the videos, which he found boring.

On the questionnaire, both respondents rated Delta Networks' orientation program content "excellent" because of its informative nature. They said that orientation made them feel positive about the company because it was informative and fun. One respondent said the process was "laid back" and "open", while the other stated the program made him feel proud to be a part of the company. They also indicated on the questionnaire that they felt the company orientation program provided them with a realistic picture of their work environment and responsibilities. One respondent stated that he knew to expect stress, but also to expect team support. The other stated that his questions were answered honestly during orientation. In addition, both IT professionals stated that they received personal attention during orientation. One noted that discussions were personal and everyone knew the orientees by name. The other stated that people took the necessary time to answer his questions. They also indicated that the orientation program lessened their uncertainties about their new jobs. One stated he felt he would be sheltered during his learning process by his team mates. The other stated that he felt he "fit in" with his team mates right away.

When asked what they believe is important to include as part of an orientation program, one respondent stated a social event like the Backyard Barbeque should be included to provide IT professionals the opportunity to meet company members informally. The other respondent stated that allowing IT professionals to meet senior department members to acquire information about day to day work-related issues is important. It should be noted, however, that both respondents stated they are least motivated by overarching organizational policies and procedures because they are not relevant to their jobs, or to whether or not they enjoy their work.

Training

Training programs are fully sponsored for IT professionals both within and outside the organization. Training is provided internally in the form of interactive discussions held in the conference room between IT consultants and specialist team members, and access to video seminars for hardware maintenance. The organization also has a computer lab with ten PCs that IT professionals can use for training purposes. In addition, telephone support professionals are provided in-house mentors who are accountable for providing support in the form of searching for additional information and providing solutions for difficult client support issues.

External training is provided to IT professionals in the form of partnerships with two technical certification centres to provide training on product upgrades, and certification opportunities. Certification centres are involved in giving lecture courses to IT professionals on various topics, as well as providing access to computer-based hardware and software training. Also, IT professionals are fully reimbursed for any training materials they purchase to enable them to perform their work. Reimbursement is contingent upon the fact that all training materials remain on company premises and are the property of the organization.

Training programs and internal facilities are continually being reviewed for the purposes of upgrading, meeting internal demand, and remaining current. Evaluation involves the cooperation of the human resource department, IT team leaders, and IT professionals. Training programs are under constant review, and the evaluation process involves soliciting survey feedback from IT professionals, as well as ongoing discussions with client development managers, IT team leaders, and IT professionals. In the past year, one significant change has occurred in the organization's training strategy for IT professionals. Last year, the organization

designated certain senior IT professionals as in-house mentors to provide additional support to help desk teams.

Perceptions of the HR manager: The HR manager from Delta Networks said that training is essential for IT professionals to perform effectively in their jobs, so it must be a critical part of the reward program in an organization. On the questionnaire, she rated training as the second most important best practice affecting the retention decisions of IT professionals.

The HR manager stated that she feels the organization requires more software, books, video seminars for certain courses and hardware products, and additional computers for the lab. Although the company is constantly purchasing training materials on an as-needed basis, more materials are required to upgrade current equipment in the practice lab. Presently, the computers are slightly outdated and will need to be replaced within the next year or so. However, resources are limited and, as a result, emphasis must be placed on the materials that are immediately necessary to fulfill client needs.

Perceptions of IT Professionals: Both respondents indicated that training is critical to their retention decisions. On the questionnaire, they rated training the most important practice for their retention decisions and they listed it as one of the three most important incentives a company can use to maintain their commitment. In addition, they stated that training is the single most important factor keeping them loyal to Delta Networks right now. One said that it is necessary to remain current in his field and training is expensive, so he looks for company sponsorship. The other stated that training is necessary to make good decisions for clients and

good impressions on clients, and that if he had to choose, he would “rather be paid less and fully trained than the other way around.” On the questionnaire, both respondents indicated they are most motivated by training, and that training is the most important incentive for them to remain in a company. They also indicated that training is the most important of the best practices to their retention decisions. One respondent stated he likes learning, keeping current, and fostering internal competition. The other stated that training affects his productivity and his reputation. In particular, when asked what is most important to their organizational commitment, one respondent stated that training enables him to function effectively at client sites. The other said that access to new technology keeps him up to date, creative, and shapes the way he designs products. When asked how a company should demonstrate concern for their training needs, one respondent stated it is important to have full training sponsorship and as much access to in-house training as possible. The other stated it is important to inquire about training needs, provide access to materials, and provide a comfortable work place.

Both respondents indicated on the questionnaire that they are “fully aware” of all training programs and opportunities in the company because team leaders and the HR manager are heavily involved in informing them of what is available, and in following up on their requests. One respondent discussed the “good flow” of communication about training opportunities in the organization, while the other stated that training needs are part of “daily conversation”. Both respondents also indicated on the questionnaire that they train for self-development. One stated that he must train so he can perform well at client sites, while the other stated that he must train to be marketable in the next recession.

On the questionnaire, both IT professionals rated the training programs they attended at Delta Networks as “excellent.” One said the programs were informative because they mix theory with practice, and because they are intensive. The other stated that programs are delivered in a timely fashion by qualified individuals. When asked which program components they prefer, both respondents expressed a preference for in-house courses. The first stated that they are convenient, intensive, and mix theory and practice. The second stated that they give him the “tricks” he needs to know to make a good impression at client sites because instructors know what he has to learn before going to a site. They also noted that company training programs are tailored to their needs. One stated that he is able to choose the programs he attends, and that his suggestions are appreciated and taken into consideration. The other stated that team leaders and the HR manager work collaboratively with him to ensure that his training needs are met.

The IT professionals also said that Delta Networks provides them opportunities to learn about the latest products and developments in the field because they are able to train using lab facilities, and because their jobs entail working with different client products. Also, one respondent stated that he keeps current by utilizing training centre services, while the other mentioned that he keeps current by subscribing to trade journals and using the Internet.

When asked what they feel is important to include as part of a training program in general, one respondent noted that full sponsorship of training and as much access to in-house training as possible for convenience is critical. The other stated that it is important to include in-house specialists because they have client experience and knowledge of what is needed to make a good impression with clients.

Only one negative opinion was expressed by the IT professionals regarding training at Delta Networks. When asked which training program components they dislike, they said that the computer labs need modernization. One person also remarked that the video seminars need to be upgraded.

Career Development

Delta Networks provides career development opportunities for IT professionals. Career development programs are created by the human resources department, and involve the participation of the human resource department, client resource managers, IT team leaders, and senior IT professionals. Career progress of IT professionals in the organization is followed by the HR managers to further develop the organization's mentor program. Career development at Delta Networks involves a variety of strategies including self-assessment instruments to explore the interests and career goals of IT professionals, career counselling to support IT professionals in developing realistic plans to achieve their goals within the framework of the organization, and skills inventories to aid them in determining their skill strengths and areas for improvement. Employee assistance programs are also provided for IT professionals experiencing adjustment difficulties in their work or personal lives.

IT professionals are invited to participate in career development programs as soon as they begin work. Those interested in participating in the mentor program are invited to consult the list of senior IT professionals willing and available to provide career support. They are informed about career counselling services during the orientation process and are encouraged to visit the human resource department to inform themselves about what is available to them

to help them further their objectives. Career development is evaluated once a year at Delta Networks by the HR department, IT team leaders and senior IT professionals participating in the mentor program. Evaluation is performed to determine if the mentor program is being used more frequently, the number of individuals using career development services, and whether additional services need to be offered. Instead of using survey feedback to evaluate career development programs, open discussions are held to allow individuals to elaborate on their feelings. In the last year, one major change has taken place in the career development program at the organization. This change resulted from the discovery that many IT professionals would like to expand their knowledge by certifying and working with different products. In collaboration with client development managers and IT team leaders, the human resource department is currently developing a product rotation policy to allow IT professionals the ability to try client assignments outside their original fields of expertise for periods of three to four months.

Perceptions of the HR manager: On the questionnaire, the HR manager at Delta Networks rated career development as the third most important of the six best practices on IT professionals' retention decisions. She stated that her daily interactions with IT professionals have led her to the conclusion that they prefer a sense of "independence when trying to determine their career paths." She said that they like to shape their own journeys of "self-discovery with a little support, but no coddling." She also noted that they dislike company strategies that assume that the pinnacle career goal is a certain position.

Perceptions of IT Professionals: Both respondents indicated that career development is important to their retention decisions. On the questionnaire, they both rated career development as the second most important of the best practices to their retention decisions. One said that, in general, he feels that IT professionals help the company fulfill its objectives so they merit career support in return. The other said that career development is an important issue to him right now because he is looking for more sedentary work options in the company.

When asked specifically about career development at Delta Networks, both IT professionals indicated on the questionnaire that they are “mostly aware” of all career development opportunities for them, although one noted that he is aware of what is available, but is unsure of how to apply for the programs. The other stated that career development programs are well-advertised in the company, and that he has become a mentor to “give back what he received as a newcomer.”

Both individuals feel that they will be able to achieve both short and long term career goals in the organization. In the short term, one stated he wants to gain experience before seeking promotion, while the other stated that he likes his job and has no desire for change at the present time. In the long term, they indicated that they will use their experience to seek promotion opportunities within the company.

When asked which career development program components they prefer, both respondents expressed a preference for the mentor program. As a matter of fact, they said that having a mentor program is the most important component of any career development program. One remarked that mentor programs are informative and help create bonds between individuals and the company, while the other said that mentor programs speed up newcomer

productivity. On the other hand, when asked which components of the career development program they dislike, one respondent expressed a dislike for skills inventories because he finds them boring. The other stated that he could not comment about dislikes because he only participates in the mentor program, which he enjoys.

Motivation

In terms of strategies to maintain the motivation of IT professionals, Delta Networks solicits information from IT professionals regarding all aspects of the corporate retention strategy. Open communication between the HR department, client development managers, IT team leaders, and IT professionals is encouraged regarding the work environment, work content and responsibility, orientation, training, career development, motivation, compensation, and feedback. IT professionals are encouraged to provide their feedback and constructive criticism about anything they feel has an effect on their motivation. Because of their direct contact with clients, IT professionals are aware of the relationship between their performance on the job, and the ability of the organization to meet its objectives with clients. Specific objectives for each client project are formed at the outset of the client relationship and IT professionals are accountable for their timely achievement.

Performance feedback is provided four times annually to IT professionals by the human resource department, IT team leaders, and client development managers. Performance evaluation records are tracked by the human resource department. Performance bonuses and “beyond the call of duty” awards are provided once per year at a company meeting by senior managers.

Perceptions of the HR manager: The HR manager stated that her opinions about the motivation of IT professionals are not based on research, but are the result of daily contact with them. When asked about the most valued reward overall for IT professionals, she stated that good compensation is the “reason we all come to work.” She also mentioned that training is very important to IT professionals as a reward because it is essential for good performance in their line of work.

Perceptions of IT Professionals: When asked how an organization can best demonstrate concern for their needs regarding work environment/process, work content/responsibility, orientation, training, career development, motivation, compensation, and feedback and evaluation, one respondent stated it is important to encourage individuals to speak out and then to support them when they do. The other respondent stated that meetings with speedy follow-up on all questions, comments, and suggestions is necessary. When asked how Delta Networks demonstrates concern for their needs regarding the latter issues, they discussed the open communication in the organization, and the opportunities they have to discuss their concerns and provide suggestions about all work issues.

Compensation

In terms of financial compensation, IT professionals at Delta Networks are provided competitive base salaries, along with performance bonuses for a variety of work process issues. Performance bonuses are given for outstanding team collaboration, sales achievements, client satisfaction, and training achievements. In addition, “beyond the call of duty awards”

including gift certificates for music retailers, movie theatre passes, free dinners, and one day off are given to those IT professionals who go out of the way to provide exceptional customer service. IT professionals are offered comprehensive insurance coverage, profit sharing opportunities, and are fully reimbursed for training materials purchased for work-related assignments. Corporate expense accounts are also provided for IT consultants.

Non-financial benefits include flexible hours for IT professionals on specialist teams. Core business hours are 1:00P.M to 5:30P.M.. Apart from core hours, individuals are responsible for allocating their own work schedules. IT consultants are permitted to work from home whenever situations allow. The company dress policy is business casual, to increase individual comfort in the workplace. Also, for IT professionals requiring stress management support, employee assistance programs are available. Support is provided for those in crisis at work or in their personal lives. The organizational compensation program is evaluated once annually by the human resource department.

Perceptions of the HR manager: According to the HR manager, compensation is the most important factor affecting the retention of IT professionals. Good compensation is the foundation for a total reward system because it is the primary reason all employees, including IT professionals come to work. When asked if there was anything the HR manager felt should be included in the organization's compensation plan, she said that wellness programs should be included in the category of non-financial benefits, but that no one knows where the majority of fitness needs lie and no one wants to start a program that excludes certain individuals, so implementation is stalled.

Perceptions of IT Professionals: Both respondents indicated that compensation is important to their retention decisions, although one did state it is not as important as liking his job, and the other stated that it is not as important as training, interesting work, or quality of life. Both respondents expressed satisfaction with the diversity of non-financial benefits the company provides. They indicated that non-financial benefits like flexible hours, telecommuting, and pleasant surroundings are the most important aspects of a company's compensation and benefits plan. One respondent also mentioned casual dress, while the other discussed the merits of a comfortable work environment with benefits like television, gym, and restaurant. When asked which non-financial benefits they least prefer, one respondent stated that stress management programs are useless because individuals who cannot tolerate stress should rethink their careers. The other respondent stated he has no complaints about the non-financial benefits he receives.

When asked which financial rewards they prefer, they discussed competitive salary and stock options. One respondent also expressed a preference for paid vacation and full educational reimbursement. The other stated he feels he cannot choose because he finds all the financial rewards at Delta Networks satisfactory. When asked which financial rewards they least preferred, one respondent stated that the insurance plan is unnecessary, and the other respondent stated he would like a registered retirement savings plan.

On the questionnaire, both IT professionals said that they are more motivated in a company where rewards are both equally distributed and performance-based. One stated that performance bonuses encourage individuals to put extra energy into their work, while the other stated that they make work "fun" by fostering internal competition. When asked whether they

are motivated more by financial rewards or non-financial benefits, one respondent stated he is motivated by a balance of the two because “why kill yourself to make the big bucks if you can’t enjoy it?” The other respondent stated that he is more motivated by non-financial benefits and he wants an exciting job in a good work environment with training opportunities.

On the questionnaire, both respondents also indicated that they feel the compensation plan at Delta Networks is tailored to their needs. They expressed satisfaction with the types of rewards offered due to the balance between financial rewards and non-financial benefits. In addition, they stated that they feel rewards are fairly distributed in the company. Specifically, one respondent stated that rewards for performance are accessible to all types of IT professionals, while the other mentioned that everyone is given the same benefit plan. One also expressed a preference for the amount of non-financial benefits the company offers. They both said that rewards are not based on office politics.

When asked what they most value as a reward, one respondent expressed a preference for vacation time, while the other expressed a preference for training. One stated that access to diverse technology experience is the single most important factor keeping him loyal to the company presently, while the other stated that training and the ability to choose what he learns has the greatest effect on his loyalty to the company right now. When asked which three incentives a company can use to maintain their loyalty, both respondents listed vacation time and training on the questionnaire. One also listed profit-sharing, while the other also listed flexible hours.

Feedback & Evaluation

Delta Networks periodically evaluates the orientation, training, career development, and compensation programs for IT professionals. Survey feedback is used as a means of evaluating the orientation and training programs, while career development and compensation program evaluation is the result of the collaboration of focus groups. Regarding survey feedback, client development managers, IT team leaders, and IT professionals are surveyed concerning the orientation and training programs, and survey feedback data are kept for one year in the organization. Open communication exists with IT professionals, the human resource department, and IT team leaders concerning all aspects of the organizational retention strategy. Cost benefit analysis is only used as part of the evaluation process for IT training programs. The overall corporate retention strategy is constantly evaluated at Delta Networks to ensure that the organization remains ahead of competitors in terms of IT professional retention. In the past year, one change has occurred to the organizational retention strategy for IT professionals. Now, client development managers are included in the performance evaluation process.

Perceptions of the HR manager: According to the HR manager, retention strategies and programs are best evaluated by including the suggestions and opinions of individuals in all levels of the organizational hierarchy. Open communication in terms of both physical space and mental attitude is essential for enhanced retention rates. She stated that including IT professionals in all areas of decision-making is the best way to retain them.

On the other hand, she also noted that because so much time and expense is involved in the constant review of training needs, administering surveys and analysing feedback is becoming more difficult. Also, she believes that open discussions give individuals more of an opportunity to elaborate on their feelings and provide suggestions than a “standardized form”, and thus, achieve better results. In addition, cost/benefit analysis is not used to determine the effectiveness of any other retention programs besides training because of a lack of familiarity with the application of the methods to other programs.

Perceptions of IT Professionals: When asked how important the feedback and evaluation process is to their retention decisions, one respondent stated that if his opinions and suggestions about training, work process, and work environment are ignored in a company, he “won’t hesitate to quit” and search for better alternatives where his participation and input are valued. He also stated that allowing him a forum to discuss his suggestions and concerns is just as important as providing him feedback about his performance. The other respondent stated that feedback and evaluation is not as important as training and a comfortable work environment.

When asked to elaborate on how they regularly provide opinions, impressions, perceptions, and perspectives about company retention strategies, both respondents discussed the open communication policy between IT professionals, the HR department, and team leaders. Also, one mentioned the surveys pertaining to orientation and training. They indicated that they feel they can affect policymaking decisions regarding the retention of IT professionals due to the open communication policy in the organization. They also said that

the company's open communication policy is an indication that it makes a solid effort to include IT professionals in the evaluation of retention strategies targeted towards them.

Both respondents also feel that their opinions about work environment and work process are valued and appreciated. One stated that the workplace is informal. He feels free to speak out about good and bad issues, and feels part of a team even if he is not always in agreement about certain work process issues. The other stated that the HR reps and team leaders tell IT professionals their opinions are appreciated and show it by following up on all comments and suggestions.

When asked, in general, what they believe should be the most important aspect of a company's feedback and evaluation program, one respondent stated that regular performance feedback and the ability to make suggestions about work process are most important. The other said that being comfortable with approaching team leaders and HR reps about problems, and having team leaders who respect his ability to decide what is best for a client project are important. When asked, in general, if there are any alternative strategies a company can implement that would affect their commitment, one respondent stated in-house daycare would be a positive element. When asked if Delta Networks is currently implementing any alternative retention strategies, both respondents discussed the project rotation program, stated their intentions to participate, and expressed positive feelings about it.

In sum, turnover among IT professionals at Delta Networks is low. However, as part of a proactive approach to retention, the organization implements all six best practices. The HR manager at Delta Networks noted the importance of shared work space and communication for retention control. Despite a few concerns about the content and delivery

of retention strategies and programs, IT professionals expressed their satisfaction with and commitment to the organization as a whole.

Cross Case Analysis

In this section, to explore the study's findings more thoroughly, the responses pertaining to each case have been aggregated. As such, more insight can be gained about the practices and opinions of participating IT organizations, and generalizations can be made across organization type.

Turnover Rates

All of the participating HR managers stated that their organizations actively scrutinize the turnover rates among IT professionals. When asked what the turnover rate is in their organizations for IT professionals, all participants were able to give a response both to the total company turnover rate last year, and to the turnover rate among IT professionals. This is an indication that turnover is a significant issue for the organizations.

In this study, there was a distinct difference in turnover rates among IT professionals in the multinational corporations and the consulting firms. In particular, the consulting firms had much lower turnover rates among IT professionals than the multinational corporations. For example, Alpha-Med Consulting and Delta Networks had annual turnover rates of 3% and 5% respectively. Beta Imaging and DataCom had annual turnover rates of 48% and 45% respectively. There were no systematic differences across the organizations in terms of job

content. Although there were some dissimilarities among the job titles of those who were interviewed, overall, they fit into two broad categories of research and development positions, and front-line service positions (see Table 1 on page 73) . Thus, it can be inferred that job content did not affect the turnover rates of participating organizations. Also, the HR managers from the consulting firms with lower turnover rates indicated that they had fewer discussions about turnover among IT professionals than did those with higher turnover rates. This suggests that organizations begin to focus more on turnover among IT professionals as the turnover rate begins to increase.

It is also important to mention at this point that each HR manager had a clear set of opinions about why the 1999 turnover rate had increased or decreased compared to the 1998 turnover rate, and about how the turnover rate compares to that of industry competitors. In this study, although no turnover figures for the 1998 period were collected, the two HR managers from the consulting firms stated that turnover rates are decreasing, while the two HR managers from the multinational corporations stated that the rates are steadily increasing.

The HR managers from the multinational corporations with high turnover rates both stated that turnover continues to increase due to competition with other multinational corporations that use better salary to lure away IT employees. However, none of the IT professionals from the multinational corporations discussed salary as a reason for searching for better job opportunities, or the existence of other multinational corporations baiting them with better pay packages. Instead, they discussed the need for more time off and more quality of life benefits such as flexible hours, more communication and participation in decision-making, and recognition for achievement. As well, none of the HR managers in this study

mentioned monitoring the retention strategies of small organizations. Instead, their focus is on determining the strategies used by multinational competitors. In contrast, of the IT professionals who stated they were currently exploring other job alternatives, the majority discussed seeking employment in smaller firms, where they can participate more in decision-making. At the time of the interview, one participant stated that he was in the process of finalizing hiring negotiations with a smaller firm. Perhaps smaller IT firms are successfully securing a stable labour supply of IT professionals because of their unique retention strategies and programs. Thus, salary is not as important to IT professionals' retention as HR managers think it is, and HR managers are neglecting to recognize the amount of competition being generated by smaller organizations.

In contrast, both HR managers from IT consulting firms with lower turnover rates stated that turnover continues to decrease due to a proactive approach to retention strategies for IT professionals. Similarly, the IT professionals from the consulting firms all indicated that they could best further their careers within the company because of strategies geared toward enhancing their experiences and participation within the organizational framework. Thus, from the responses in this sample, it seems that the consulting organizations with lower turnover rates are more in tune with factors affecting turnover among IT professionals. Perhaps this awareness stems from the fact that HR managers from the consulting firms have a high level of contact with IT professionals on a daily basis, and are highly involved with them during the turnover process. Or, perhaps because consulting firms are typically flatter and leaner than multinational corporations, they are more inclined to adopt a client-centred approach with their internal labour supply. Because of their bulky organizational framework, a client-centred

managerial philosophy is less a part of the organizational culture in multinationals. This results in a lack of awareness of factors affecting IT professional turnover.

On the other hand, it is also possible that instead of being more in tune with the factors influencing turnover, consulting firms are simply more tolerant of IT professionals' demands, which results in a lower turnover rate. After all, the HR manager from Alpha-Med Consulting did state that she felt the firm made IT professionals "sometimes a bit too welcome and over-accommodated in their demands." Thus, although it is clear from the participants in this study that proactive retention strategies designed around the preferences of IT professionals result in lower turnover rates, a number of factors affect an organization's ability to design such an approach. In this case, it appears that industry type, organizational culture and organizational size all had roles to play in the design of corporate retention strategies.

Evaluation of Retention Strategies

All participating HR managers stated that their organizations actively evaluate retention strategies for IT professionals. When asked what the average retention time is for IT professionals in their organizations, all HR managers had a clear response, which is an indication that retention rate is a significant issue for the IT organizations in this study. For instance, Alpha-Med Consulting and Delta Networks have average retention times of 5 years and 3 years, respectively. Beta Imaging and DataCom have average retention times of 1 year and 1-2 years, respectively.

Retention strategy evaluation takes many forms across the four participating organizations. Alpha-Med Consulting uses a combination of formal and informal communication with IT professionals, along with an annual strategic planning meeting and cost/benefit analysis. Beta Imaging evaluates and shapes retention strategies using an annual strategic planning meeting. DataCom evaluates retention strategies through the use of formal survey feedback from IT professionals regarding general satisfaction with the organization, and with orientation, training, and career development programs. Delta Networks evaluates retention strategies primarily through the use of open communication between IT professionals and other organization members. However, one commonality exists between the two organizations with the highest retention rates. In both consulting firms, IT professionals are given more opportunities, both formally and informally, to provide feedback and suggestions and participate in decision-making regarding retention programs. This suggests that open communication is a factor relevant to IT professionals' retention decisions.

Further evidence of the importance of open communication can be found in an analysis of IT professionals' responses. Throughout the questionnaires and interviews, IT professionals from the consulting firms with higher retention rates made reference to the fact that information about retention programs is well-communicated, and that they have the ability to provide suggestions and participate in decision-making processes that affect the quality of retention programs. In contrast, IT professionals from participating multinational corporations with lower retention rates stated that they were poorly informed and unable to participate in decision-making about the programs, and that they feel their suggestions for improvement are being ignored.

Three factors can affect an organization's ability to adopt a more open approach to communication. First, *organizational size* can limit the ability to foster a communicative environment. As is the case in the multinationals in this study, the larger the company, the more difficult it is to have direct contact with all employees. Less direct contact between the HR department and front-line employees results in less opportunities for communication between the two parties. On the other hand, in smaller organizations, the HR department and front-line staff have more direct contact, so opportunities to communicate about pertinent work issues are increased.

Second, *organizational structure* has an effect on communication. For example, in multinational corporations, many employees across geographic boundaries may have the same job title and project assignment. Although organizational productivity may improve if all parties have the means to exchange information with one another, such seamless communication is not often possible because of factors like limited financial resources, language barriers, and time zones. One IT professional from DataCom noted the problems with interdepartmental communication in the organization because of its structure. Among other things, he mentioned that it is "almost impossible" to locate those accountable for similar projects in other corporate locations because of the size of the company, and the "disorganized presentation" of the company directory.

Third, *organizational hierarchy* also has an effect on the communication process. Typically, more hierarchical levels lead to the emergence of bureaucratic policies and procedures, which impede the communication process. Thus, organizational size, structure, and hierarchy could all explain the differences in communication between the consulting firms

and multinational corporations in this study.

Use of the Practices

Overall, the four participating organizations implement retention strategies which encompass the six retention best practices suggested in the literature as the optimal means of reducing turnover. The only organization not implementing one of the practices is Beta Imaging, which does not have an orientation program for employees. The other three organizations implement all six best practices of orientation, training, career development, motivation, compensation, and feedback/evaluation.

The true differences between organizations do not lie in the fact of their implementation of the six best practices, but in the *content* of each of the practices. Since each organization has its own culture, it follows that the retention strategies of each one are implemented quite differently. In fact, it is the content and the method of implementation of each practice that most affects the retention decisions of IT professionals.

Orientation: In the case of orientation, all HR managers indicated that they feel it is the least important of the six best practices to the retention of IT professionals. IT professionals, in turn, all rated it as having the least effect on their retention decisions. On the surface, it may seem that both parties are in agreement that orientation is unimportant to retention. However, when one explores further, other findings become visible. First, in Beta Imaging, where no formal orientation program exists, both IT professionals stated that they feel that a formal introduction to the organization would have been a nice gesture on the part of the organization, to eliminate

the pressure they felt to introduce themselves to colleagues and organizational processes. Thus, it seems that neglecting to provide an orientation program is negatively perceived by IT professionals.

The key differences between the organizations' orientation programs had to do with the *content and delivery of programs*. Three of the four participating organizations have an orientation program for IT professionals, but the content of each organizations' program is quite different. For example, although the three organizations use realistic job previews as part of their orientation program, the *method by which they are presented* is different. The HR managers from both consulting firms stated that new IT professionals were presented with realistic job previews from senior IT professionals in the company, which included the discussion of client service issues, overtime and travel requirements. In contrast, the HR manager from DataCom stated that new IT professionals were presented with realistic job previews during the lectures at the general orientation by members of the HR department, IT supervisors and senior IT professionals. Although the realistic job previews consisted of a lecture regarding the stress of deadline pressure and overtime at DataCom, the emphasis was placed on the importance of security as an organizational issue rather than on factors directly affecting the work performance of IT professionals.

It was clear from the responses of IT professionals, however, that the individuals who presented the realistic job previews did not matter. When discussing whether or not they felt that orientation provided them with a realistic picture of the work environment and responsibilities, no one discussed the participants in the program. Instead, the focus was on whether or not they were told the truth about job stress, and whether participants answered

their questions honestly. Those dissatisfied with orientation discussed the lack of information they received about their work, and the fact that the level of job stress and the work environment were not honestly discussed. Although it is unclear how honest disclosure of job stress and work environment conditions affect IT professionals' retention decisions in the long run, it is clear that these factors affect their satisfaction with the organizational retention strategy.

In addition, the types of media used during orientation varied across organizations. Although the three organizations use interactive discussions and videos to facilitate the orientation process for IT professionals, Alpha-Med Consulting also uses lectures, and DataCom also uses role-play scenarios. Although a few IT professionals indicated that they felt that videos during the orientation program were boring, on the whole, the type of media used could not be equated with the satisfaction or dissatisfaction of IT professionals regarding the orientation program. Instead, they expressed their satisfaction with the programs that provided them with more *personalized attention*. For example, the respondents from DataCom stated that they were not given any personal attention during orientation, but just watched videos and sat in lectures "like in high school." Thus, it is not the type of media that affects the satisfaction of IT professionals with orientation, but the amount of personal attention they receive during the program. Once again, although it is unclear as yet how including opportunities for personal attention during orientation affects IT professionals' retention decisions in the long run, it is clear that it does affect their satisfaction with orientation as a retention strategy.

Participants in the orientation programs included members of the HR department, direct IT supervisors, and IT professionals, however in both consulting firms senior managers also have participatory roles in the orientation process. Respondents in this study who were given the opportunity to interact with senior managers during orientation indicated that this made them feel valued by the organization. Although they did not indicate that they expect or want senior managers to present job specific information or realistic job previews, they did appreciate the opportunity to discuss other issues with them. In fact, in a number of cases, IT professionals were impressed by the fact that senior managers considered it important to welcome them into the organization personally. Regardless of their level of participation in the program, the mere presence of senior managers at orientation left the impression that IT professionals were valuable corporate assets. Therefore, when possible, the participation of senior management in the orientation process should be encouraged. Regarding the *content of orientation programs*, the IT professionals from Delta Networks, who both rated orientation program content as excellent, expressed a preference for the informative nature of the program and the lack of formality used to present it. They also indicated that the orientation program made them feel positive about the organization because it was both informative, and fun.

As well, each organization chooses a different way of making their orientation programs *innovative*. For instance, the orientation program in Alpha-Med Consulting includes the Party Hat Relay Contest which involves the participation of IT professionals, and members of several departments. Orientation in DataCom includes a night of improvisation theatre with representatives from all levels of the organizational hierarchy in attendance, and Delta Networks has chosen to include a Backyard Barbecue featuring senior executives as grill chefs

and the attendance of all the organization's employees. Although IT professionals enjoyed both the improvisation night and the Backyard Barbecue, the Party Hat Relay contest received mixed reviews. One respondent said he found it quite enjoyable, while the other said he found it embarrassing, and discussed how it affected his ability to form relationships with colleagues for the first few months of work. The improvisation night and the Backyard Barbecue have one thing in common. Individuals participate in both events according to their respective comfort levels. On the other hand, the Party Hat Relay Contest requires a certain level of participation from individuals regardless of their abilities or preferences. To ensure that no one is negatively affected by events during orientation, programs should include only those events where all individuals are able to choose their means and level of participation. Once again, it is unclear how this will affect the retention decisions of IT professionals in the long term, however, increasing their satisfaction with the organization at the time of entry is likely a step in the right direction.

The *length of each organization's orientation program* also varied from one week in the case of Delta Networks, to two weeks in the case of Alpha-Med Consulting, to six weeks in the case of DataCom. However, it was clear from IT professionals' responses that their concern was not with the length of the programs per se. Although the two respondents from DataCom did state that they felt the program was too long, none of the respondents gave an opinion about an ideal time frame for orientation. Instead, they focused on the idea that most of the program emphasis should be placed on being oriented to their respective departments to learn their jobs and meet colleagues.

All IT professionals expressed the importance of having a thorough departmental orientation to meet work colleagues and acquire information about the work environment and work process. Furthermore, all stated that the emphasis of an orientation program should be placed on departmental orientation following a brief introduction to the organization as a whole. Thus, organizations investing heavily in general orientation sessions may be better off restructuring programs to emphasize departmental integration. For example, the orientation process in Alpha-Med Consulting and DataCom included Headquarters visits. Respondents from these organizations indicated that they enjoyed the opportunity to interact with senior management during the visits, but, they also noted that the visits took time away from the more relevant department orientation. For these organizations, lengthening the departmental orientation and trying to integrate senior management in the program without a headquarters visit could result in savings as well as increased satisfaction among IT professionals.

It is clear that all participating organizations in this study are attempting to engender the loyalty of IT professionals to the whole firm by presenting a general orientation to the organization, but an alternative approach is required because IT professionals dislike these types of programs. As has been previously mentioned, they find the presentation of company processes pertaining to hierarchy, safety, security, and culture irrelevant to their jobs, and they prefer more job-specific orientation to their departments and colleagues. It also appears that the smaller consulting firms' orientation programs have been more successful at engendering the loyalty of IT professionals. Perhaps the amount of direct contact with other organization members in small firms creates an attachment to the overall organization. After all, two respondents from a consulting firm stated that they felt part of a "family."

It is clear that size, structure and hierarchy make it more difficult for multinational corporations to develop this type of loyalty to the whole firm. IT professionals from these companies feel they work in a “microcosm” unaffected by overarching cultural issues and company processes. However, this is not to say that engendering the loyalty of IT professionals in large organizations is impossible. It has previously been demonstrated that these individuals are loyal to the teams and departments within which they work. This is best demonstrated by comments made by IT professionals that they must perform well for the sake of their teams, and that their morale is affected by constant team restructuring that is the result of high turnover. One IT professional from a multinational corporation stated that it is “hard to keep finding reasons to come in [to work] when the faces [of the team] keep changing.” This finding that IT professionals are loyal to their work teams confirms the research by Kinsey-Goman (2000), which found that one team mate’s decision to quit can result in ‘workforce haemorrhage’ wherein a number of team members also leave because they feel that disbanding their work team will result in an unsatisfactory work environment.

To increase retention, large organizations should focus their efforts on reinforcing close-knit team cultures that tie back to the overall organizational culture. This can be done by investing in departmental orientation programs that include the presentation of company processes, as well as an illustration of how those processes affect department members. Perhaps decentralizing the HR function to the department level in large organizations can help IT professionals identify with the overall organizational framework. HR managers are aware of company processes and cultural factors that must be reinforced at the departmental level, and as such, can participate in designing orientation programs that effectively do so. As well,

their direct contact with IT professionals will put them in a position to aid with the implementation of other retention practices.

Thus, there are no patterns linking the different methods of implementing orientation programs to IT professionals' retention decisions. However, programs that foster their loyalty to the department and work teams could be used to create commitment to the organization as a whole in the long run. Therefore, reinforcing departmental cultures by tying them back to the overarching organizational culture will give firms a competitive advantage in the area of organizational commitment.

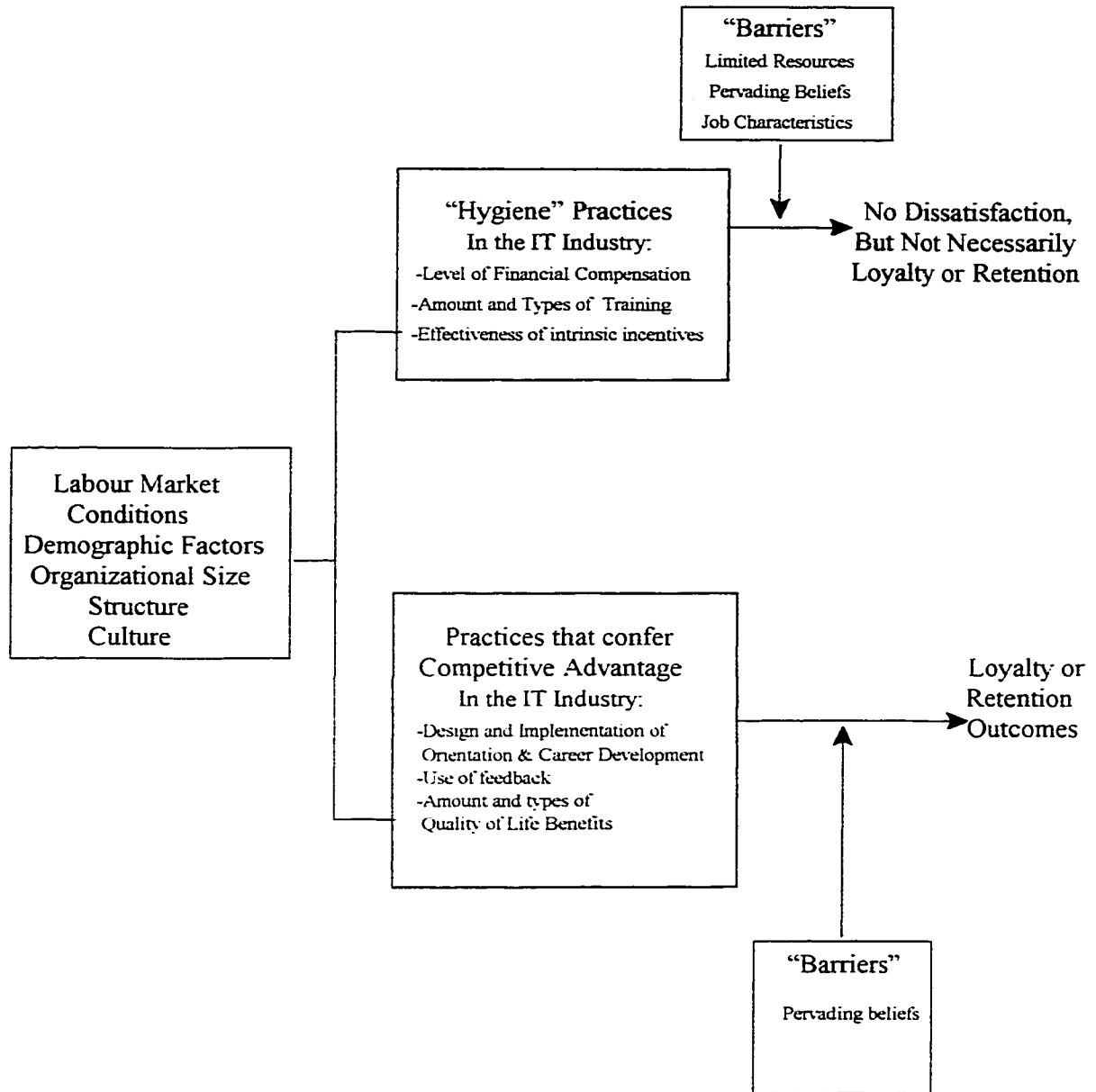
According to Pfeffer (1994), sustainable competitive advantage is achieved when three requirements are met. First, corporate practices must be able to be *differentiated from competitors*. In the case of retention practices, organizations should focus their efforts on those practices that are not well organized or fully implemented by competitors because opportunities to excel are abundant in those areas. For example, it is possible for firms to differentiate themselves from competitors by using orientation to reinforce departmental cultures and strengthen the overall organizational culture. In particular, for larger organizations whose competitors' retention strategies do not emphasize the orientation process, there are opportunities to design and implement programs that strengthen organizational culture and build commitment. Second, to build competitive advantage, corporate practices must *provide positive economic benefits*. In the case of retention, practices are beneficial when they lead to enhanced commitment or retention. By designing and delivering orientation programs that build on IT professionals' sense of departmental loyalty, organizations will benefit from higher levels of commitment and retention. Third, corporate practices that build competitive

advantage are *not readily duplicated*. In the case of retention, organizations must strive to create strategies and programs that are not easily imitated by competitors. By creating unique retention strategies and programs in areas not fully recognized by competitors, organizations continue to reinforce their cultural system, and an entire organizational culture is not easily imitated (Pfeffer, 1994). For example, because a firm's orientation process and programs are representative of the its culture, it is virtually impossible for competitors to copy. Thus, although participating HR managers stated that it is not critical to retention decisions, in fact, orientation can be a source of sustainable competitive advantage to organizations in this area (see Figure 1 on page 188).

Training: In both the questionnaires and interviews, all IT professionals expressed preferences for training opportunities in the organizations in which they work. They stated that the availability and accessibility of organizational training programs and opportunities, as well as the ability to contribute to decision-making regarding training programs is critical to their retention decisions. As a matter of fact, they all rated training as the most important practice organizations can use as an incentive to retain them. Two stated that they would rather take a pay cut than a cut in training programs or opportunities. All eight indicated that training has the most important effect on their commitment to continuing to remain in a company. In addition, half of the IT professionals stated that training and access to new technology is the single most important factor keeping them loyal to their organizations right now. As well, five IT professionals in this study listed training as one of the three most important incentives an organization can use to maintain their loyalty. A number of IT professionals stated that they

Figure 1

A Contingency Approach to Retention



are most motivated by training because it affects work performance and survival in the IT field in terms of skills and reputation, and because keeping up-to-date with industry developments is both challenging and exciting. Also, all IT professionals indicated that inadequate training opportunities would cause them to leave an organization.

When asked which training program components they preferred, seven IT professionals expressed a preference for computer-based training either independently in lab facilities at work, or as part of in-house courses. IT professionals stated that they found computer-based training allowed them to mix theory with practice, to train independently at their own speed, and to choose what they learn. One IT professional expressed a preference for having access to an in-house library to be able to train independently. Another expressed a preference for the ability to do market research at technology fairs to focus project objectives and to compare his progress with others in his field. Also, the two IT professionals who have access to in-house courses given by IT specialists stated that they like the convenience and intensive nature of the in-house workshops. The IT professionals who rated their organization's training programs "excellent" seemed to prefer qualified instructors who teach intensive courses designed to provide the maximum amount of information in the shortest amount of time.

All IT professionals expressed a preference for customized training opportunities, in the sense that they like to *contribute to decision-making* about prioritizing, restructuring, and adding training programs. They also stated that they prefer to work with up-to-date technology, to select which programs they attend, and to work in an environment where their need to train is supported both financially and attitudinally. In contrast, IT professionals who were involved in training programs at external training centres commented on the long waiting times for

service, the inconvenient locations, and the lack of personalized service. Therefore, to increase retention rates among IT professionals, organizations must make training programs available and accessible, and must include IT professionals in the decision-making process regarding such programs.

The importance of training is also demonstrated by the fact that the HR managers from Alpha-Med Consulting, DataCom, and Delta Networks stated that training needs and the content of training programs are discussed virtually constantly by representatives from the HR department, direct IT supervisors, and IT professionals. Also, all organizations reported having revised or modified training programs for IT professionals in some way in the past year. Training seems to be a large part of all the organizations' retention strategies for IT professionals because, of all the retention strategies discussed in the interviews, IT professionals are provided the most choice and access to training programs. Thus, there was great similarity in the responses of both IT professionals and HR managers regarding the importance of training as a retention strategy. *Conditions in the labour market* have created the need for organizations to offer diverse training opportunities to IT professionals to keep them abreast of technological advancements affecting their work. Also, IT professionals require training to upgrade their skills so that they can perform effectively on the job and remain marketable in the industry.

In this study, three IT professionals stated that training is the most important factor for their commitment to an organization because it affects their ability to survive outside an organization and to perform effectively within an organization. This finding corroborates Ferris & Urban's (1984) research, which states that training allows for better performance on

the job, which reduces the likelihood of turnover. IT professionals' preferences for remaining autonomous create their needs to have an abundance of training opportunities for self-development. A number of IT professionals indicated that they feel training is important for survival in the market outside their organizations. One remarked that he made sure to expand his knowledge so that he would be more marketable in the next recession. Although this does seem to confirm findings in the literature which state that Generation X employees are not loyal to their organizations, upon closer inspection one finds that achieving their loyalty is possible.

Reciprocity between the organization and the individual influences turnover decisions. The IT professionals from the consulting firms in this study acknowledged the effort their organizations had put into retention programs for them, and stated that this had an effect on their organizational commitment. For example, one mentioned that he realized that the organization was taking a risk to train him so thoroughly because of the number of opportunities in the marketplace for him outside the company. He said that he appreciated the trust they have shown by training him, and he now feels that he owes them "a debt of loyalty for a certain period of time to pay them back." Thus, when organizations demonstrate trust through significant investment in them, IT professionals seem to display higher levels of commitment. In other words, IT professionals are willing to commit if they feel that their organizations are reciprocating their performance efforts with investments in their skill development. Therefore, retention can be affected by the degree to which organizations can achieve reciprocity agreements with their IT professionals such that increased organizational investment in them results in increased levels of organizational commitment. This confirms

the research of Becker (1962) and Bouillon et al. (1995/1996), which found turnover to be inversely related to the amount of organizational investment in employees. However, in the background, IT professionals do seem to sense that, when in crisis, organizations will not protect them, so they have to be prepared to find other alternatives should such an occasion arise. This confirms the findings in the literature that state that Generation X employees' experiences with the effects of corporate downsizing on their parents' generation have led to their perception that organizations are not loyal to employees (Cuadroni, 1997; Tulgan, 1995).

Although all the organizations in this study have training programs in place to retain IT professionals, the content of the programs is quite different. For example, all organizations provide both internal and external training opportunities, however, the *media* used to provide the programs is quite different. Although all the organizations use computer-based training, three out of four organizations also use lectures to provide training. Also, two of the four organizations use interactive discussions and videos in their training programs, while one also uses role-playing techniques. Both consulting firms seem to give IT professionals access to specialist instructors for interactive training sessions, while the multinational corporations seem to emphasize classroom lecture methods.

While IT professionals have a number of preferences regarding training programs, four factors influence their satisfaction. First, IT professionals in this study remarked on their need to have knowledgeable instructors who are able to give them the information they need as quickly as possible. Although IT professionals from all participating organizations expressed preferences for *intensive training programs* that allow them to transfer learning to the job as quickly as possible, they also complained about their organizations' requirements for continual

certification upgrades. For instance, the four IT professionals from the multinational corporations expressed a dislike for the stress of continually having to pass certification exams as part of their jobs. They all mentioned that they resented not being able to control the deadlines for passing their exams. By imposing deadlines, they felt their supervisors were implying that they could not be trusted to continue upgrading their skills on their own. The IT professionals in this study also said that having to continuously pass exams and adapt to long waits at external training centres is stressful. One IT professional commented that the HR manager did not seem concerned with any other aspects of his performance besides certification results. Others stated that they felt it difficult to juggle both certification deadlines and work responsibilities.

Because they require their IT professionals to acquire certifications, organizations are investing heavily in the services of external training centres that are qualified to administer certification courses and exams. An analysis of this study's results reveals that increased emphasis on certification requirements should be questioned. IT organizations must ask themselves how much value certification brings to work performance. The IT professionals in this study can maintain their work performance without passing certification exams if they are properly trained. As a matter of fact, insisting on certificates can actually backfire for IT organizations because possession of certificates gives IT professionals more leverage in the job market and thus, more incentive to leave. Perhaps organizations could better deploy their resources by eliminating certification requirements for IT professionals and focusing on providing courses or workshops geared toward upgrading skills.

Second, IT professionals prefer training programs that offer them the opportunity to *combine theory and practice*. For example, practice labs were regarded as important training instruments. By eliminating certification requirements, organizations can make more of an investment in upgrading in-house training facilities such as computer labs and libraries that give IT professionals opportunities to apply what they have learned in courses.

Third, IT professionals stated that it is important to have *the ability to train independently*. Again, the IT professionals in this study all discussed the importance of having training facilities in their organizations where they can focus on their respective training needs. In particular, the location of training programs is crucial. Many IT professionals in this study noted the importance of internal training facilities for convenience. Thus, emphasizing investment on internal training programs and facilities will be of value to the firm and IT professionals.

Fourth, IT professionals expressed the *need to be trained on both internal and external products*. A number of IT professionals stated that their performance is affected by their awareness of trends in the market. Many of the organizations in this study sponsor training only on internally-developed products, and IT professionals state that this affects their loyalty. Since their performance is affected by the degree to which they are trained on external products, organizations who provide such training achieve a competitive advantage over those that do not. However, it should be noted that providing external product training can result in a vicious cycle because those IT professionals trained may decide to go to other firms to use their skills. So, to remain competitive, it seems that organizations must risk losing IT professionals by providing external product training.

In sum, training is important to the IT professionals' retention decisions, although it is unclear how organizations can achieve a competitive advantage in this area other than by eliminating certification requirements. In fact, training as a retention practice does not meet any of the three requirements of competitive advantage (Pfeffer, 1994) previously discussed. Because all organizations are required to provide training to IT professionals to remain profitable in the industry, they do not have much room to manoeuvre to differentiate themselves from competitors in this area. Furthermore, many training programs and facilities are easily duplicated by competitors. So, although training does provide productivity benefits to organizations, it will not result in sustainable competitive advantage because it is difficult for firms to differentiate themselves in this area since facilities and programs are easily imitated and widely offered by competitors (Pfeffer, 1994). However, ensuring that IT professionals have access to varied training programs which meet their needs for convenience, independence, which combine theory and practice, and which involve externally-developed products does promote satisfaction. In this way, training can be regarded as a "hygiene factor" (Herzberg, 1968) because although it does not directly result in the retention of IT professionals, it does keep them from becoming dissatisfied with the organization, which could eventually lead to turnover (see Figure 1 on page 188). The lack of opportunity to achieve a competitive advantage in the area of training illustrates the importance of other practices, such as orientation, to retention.

Career Development: A glimpse of the culture of each organization can be had by reviewing the types of career development opportunities offered to IT professionals. For instance, Alpha-Med Consulting promotes “Career Day” for IT professionals to encourage their career development. Beta Imaging strives to ensure that career development programs are comparable to those offered by competitors. DataCom sponsors mentor events to promote strengthening ties between IT professionals in similar fields throughout the organization. Delta Networks offers a mentor program to give IT professionals the opportunity to develop relationships with senior IT professionals and executives across all IT fields in the organization.

All participating organizations have career development opportunities for IT professionals, but the types of programs and opportunities vary across the organizations. For instance, although all offer counselling and skills inventories as part of their career development programs, three out of the four organizations also use self-assessment instruments and have mentor programs, and one uses psychological testing. In addition, although all organizations have career development programs which involve the participation of members of the HR department, direct IT supervisors, and senior IT professionals, some have also chosen to include senior and line managers as program participants.

With regard to IT professionals’ career development preferences, for various reasons, all participating IT professionals indicated that career development is important to their retention decisions. It was rated by all IT professionals as the second most important of the practices as a retention incentive. On the other hand, all organizations reported infrequently discussing and modifying career development programs, so it appears that not much emphasis is placed on career development as a retention strategy for IT professionals.

Organizational culture seems to affect the means by which organizations design their career development opportunities for IT professionals. For example, in the consulting firms, results of career development instruments are openly communicated to IT professionals, but this is not the case in the multinational corporations. In one multinational organization, results are only communicated to IT professionals if they ask for them, and in the other, results are not communicated to them at all unless they are selected for promotion. One HR manager from a multinational corporation even commented that career development is “not some partnership between the organization and IT professionals”, but is only a means of acquiring information regarding candidates that are suitable for promotion.

The loyalty of IT professionals is affected by the extent to which organizations treat career development information as confidential. In the cases where results of assessment instruments were not openly discussed, IT professionals stated that they believed promotions were based more on office politics than on merit. As a result, they were less loyal because they felt that there would be less opportunities for them to develop their careers in the organizations in the long run. As was previously mentioned, the loyalty of IT professionals to their organizations was assessed using a number of questions in both the questionnaires and interviews.

Also, in the multinational corporations, results of career development instruments such as skills inventories were not followed up with IT professionals. This type of *false involvement in the career development process* raises expectations of IT professionals. But, when results are not followed up, they question their standing in the organization and become increasingly dissatisfied with the availability of promotion opportunities, which affects their loyalty.

It should be noted that the multinational corporations in this study design their career development programs based on *comparisons with competitors' programs*. It is possible that they are using skills inventories simply because competitors are using them. If this is the case, the use of such assessment mechanisms should be questioned because they do not provide added value to either the firm or IT professionals if results are not followed up. Large organizations can improve the loyalty of their IT professionals by using other mechanisms to acquire information about their promotion potential. For example, instead of using skills inventories, HR managers could rely on information provided by direct supervisors about work performance and suitability for promotion. However, should companies find that instruments such as skills inventories are necessary, then all attempts should be made to follow up with IT professionals regarding their results. Once again, as in the case of orientation, decentralizing the HR function to the department level could be beneficial in this case. Direct contact with IT professionals on a daily basis at the department level would make the task of administering and following up on career development mechanisms more manageable for HR managers. As well, more direct contact and interaction with IT professionals would increase HR managers' awareness of where certain individuals' skills could be used elsewhere in the organization. For organizations, such as DataCom, who face internal competition because of interdepartmental transfers, decentralizing the HR function could result in better control of the flow of IT professionals within the company.

It is interesting to note that three of the four IT professionals from the consulting firms also noted that they wished to be promoted to positions less directly involved with technology on a daily basis to decrease the time they spend travelling and to decrease their job stress. This

seems to be an indication that, although IT professionals enjoy acquiring hands-on experience with new technology, they view that experience as necessary to attain consideration for promotion in their own companies or to be hired to managerial positions in other companies. In addition, although they dislike the stress in their jobs, they seem to view it as a necessary obstacle that must be surmounted to achieve success later in their careers. As has been previously mentioned, this is confirmed by the fact that half of the IT professionals in this study stated that they knew they had to perform according to the tough standards set in their companies to preserve their reputations and “get ahead later.”

Another interesting finding of this study involved the perceptions of IT professionals regarding their ability to meet short and long term career objectives in their organizations. Only the IT professionals from the consulting firms stated that they feel that they would be able to meet both short and long term career objectives in their organizations. It is interesting to note that of those who feel they can meet both short and long term career goals, all discussed their capacity to be promoted vertically in the organizations, - none preferred to remain in their current positions in the long term. This seems to be an indication that although IT professionals enjoy working with new technology and developing new products, they also want to assume leadership positions. This is contrary to the prevailing stereotype of the ‘techno-geek’, which is based on the assumption that IT professionals prefer to work on their own, are “alienated by social conventions”(Deep, 1997, p. 113), and lack people skills.

On the other hand, this study’s findings are also somewhat consistent with the characteristics of Generation X employees as discussed in the literature. As has been previously mentioned, Lankard (1995) noted the idea that Generation X employees prefer to

be the *architects of their own careers*, in charge of building their own skill base and ensuring their marketability. In general, it seems from the responses acquired in this study, that IT professionals prefer to independently shape their career objectives based on their work experiences and work preferences before participating in organizational career development programs. For example, IT professionals from all four organizations seemed to prefer participating in career development programs when they had developed career objectives, as a means of acquiring support. Thus, IT professionals use career development programs to support, not develop career choices. In other words, they have a clear idea of what they expect to gain from participating in a career development program. Instead of allowing the program to demonstrate possible career directions, they set out to personalize program content to their career interests and preferences.

It appears that although IT professionals are the architects of their own careers, they do turn to the organization to acquire support for their goals. Perhaps this explains IT professionals' preferences for career counselling and mentor programs in their organizations. Two IT professionals stated they feel it is important to have career counselling available, and one said that an open door policy between IT professionals and team leaders is important because team leaders are most able to provide information about career development opportunities in the company. Three out of the four IT professionals in consulting firms who felt able to comment on career development programs because they had participated in such programs themselves expressed preferences for the *mentor program* in their organizations. They appreciated the advice they were given from more experienced professionals in their fields. Also, when asked what they feel is important to include as part of a career development

program, five IT professionals stated they feel it is important to include mentor programs because they are informative, personalized, and foster a supportive environment for the attainment of career objectives.

This study demonstrates that IT professionals are constantly surveying technology trends in the market to see how they can develop their careers. So, to increase loyalty, organizations must focus on how they can demonstrate to IT professionals that their skills will constantly be developed within the organization. That is why mentor programs are so effective-IT professionals learn through the experiences of others that the organization can offer them long term development opportunities. Thus, organizations can maintain the loyalty of IT professionals as long as they can demonstrate that opportunities exist for diverse job experiences and skill development within the organizational framework. IT professionals' retention decisions are affected by the availability and accessibility of development opportunities. When such opportunities are scarce, they tend to seek other employment alternatives. It is unclear whether this is a reflection of the personality traits of Generation X IT professionals, or of current labour market conditions.

The results of this study demonstrate that organizations are reluctant to invest in career development programs because of the risk of developing IT professionals only to lose them to competing organizations. For example, in this study, Beta Imaging and DataCom seemed to view investment in career development as a risk because developing the talent of IT professionals can result in their pursuit of career objectives with other organizations. One HR manager stated that investing in career development while turnover is so high is "tantamount to shooting ourselves in the foot." This ignores the perception of IT professionals that a

demonstration of organizational commitment through investment in them is necessary for them to display their commitment in return.

As is the case with training, an element of *reciprocity* comes into play regarding investment in career development. Although IT professionals view themselves as independent contractors, working in “microcosm [s]” unaffected by company process, their loyalty does seem to increase when they perceive that their organizations have taken the risk by investing in them. As has been previously mentioned, one IT professional stated that he owed his organization “a debt of gratitude” because of its investment in his skill development through training. Investment in career development programs can have the same effect on the loyalty of IT professionals. For instance, both IT professionals from one consulting organization in the process of developing a job rotation program expressed the positive effect it will have on their loyalty to the organization.

Thus, by investing in career development, organizations are creating the opportunity to achieve IT professionals’ loyalty. It should also be mentioned that job rotation programs are beneficial to both organizations and IT professionals because developing their skill base increases their loyalty while helping to ensure the continuity of the organization’s internal labour supply. The results of this study indicate that job rotation programs are well-perceived by IT professionals because they value the acquisition of horizontal experiences in the organization before vertical promotions. These findings confirm research by Jurkiewicz and Brown (1998), which states that IT professionals do not develop their careers based on the traditional career model, which emphasizes the rapid attainment of vertical promotion objectives.

In terms of the attainment of competitive advantage (Pfeffer, 1994), career development as a retention practice meets all three requirements. First, because of the importance of career development to IT professionals, organizations do have opportunities to differentiate themselves from competitors by investing in this practice. In particular, because career development is underutilized, organizations can gain leverage by emphasizing it as a retention strategy, and by linking it to overall corporate objectives geared toward ensuring the continuity of the internal labour supply. Second, it has previously been mentioned that organizations can increase retention by demonstrating to IT professionals that they can offer them long term development opportunities. Third, by investing in career development, organizations can increase the loyalty of IT professionals by creating a culture of reciprocity. Pfeffer (1994) has noted that variables associated with organizational culture are not easily copied by competing organizations. In sum, IT organizations can use career development as a source of competitive advantage by differentiating themselves from competitors through the design and implementation of unique strategies and practices which enhance retention (see Figure 1 on page 188).

Motivation: It bears repeating at this point that the HR managers in this study described non-financial benefits as part of compensation. Since this is also the case in the practitioner literature, non-financial benefits are discussed in this project as part of compensation plans instead of as part of motivational strategies. As such, for the purposes of this study, the discussion of motivation has been restricted to issues of work process and job design.

Some similarities exist across organizations pertaining to HR managers' perceptions of the means by which IT professionals are motivated. All the HR managers from participating organizations stated that their organizations attempt to acquire information about IT professionals' needs at work. Attempts to acquire this type of information vary across the organizations in two main ways. First, *organization type* seemed to have an effect on the acquisition of feedback about IT professionals' needs. For instance, both consulting firms attempt to acquire information about IT professionals' needs regarding work environment/process, and work content/responsibility. In contrast, the two multinational corporations are more selective about the information they seek to acquire from IT professionals. In particular, Beta Imaging does not ask for feedback or suggestions from IT professionals regarding the work environment, work process or job design. DataCom has also chosen not to get feedback or suggestions from IT professionals regarding work environment/process, and work content/responsibility. The IT professionals in this study have linked the ability to provide feedback about work processes to their retention decisions. One stated that if he felt that his suggestions for improvement were ignored, he would quit. In general, IT professionals are satisfied when they are provided as many opportunities as possible to make suggestions about process improvements or programs related to their work.

Second, the *size and culture of the organization* seem to have an effect on attempts to acquire information about the needs of IT professionals. For example, the smaller consulting firms tend to have environments where work space is shared by IT professionals, IT supervisors, and the HR department, and informal interactions between parties is frequent. Therefore, more opportunities exist for HR managers and IT supervisors to acquire

information about the ways in which IT professionals are motivated. Also, both HR managers from the consulting firms stated that they feel that understanding the motivation of IT professionals is important to retaining them. Both HR managers from the multinational organizations feel that understanding the means by which IT professionals are motivated is unnecessary. As a matter of fact, the HR manager from Beta Imaging stated that the determination of the “needs and comfort levels of IT professionals is not the company’s focus-productivity is.” In contrast, all the IT professionals in the study said that the best way an organization could demonstrate concern for their needs is to ask about them. Some said that attempts by supervisors and the HR department to address their suggestions and concerns makes them feel more committed to the organization.

Although the motivation of IT professionals is neglected by the multinational corporations, it is important to retention decisions. For example, two IT professionals stated that access to new technology is the most important factor affecting their organizational commitment because it helps them remain up-to-date with industry developments, enhances their creativity and keeps their work interesting. The two IT professionals from Beta Imaging stated that they are most motivated by the *nature of their jobs*, which includes continual exposure to new technology. The latter finding corroborates the work of Mork & Sovitsky (1999), which found that IT professionals are more loyal to the technology they work with rather to the firms they work within. However, when combined with the findings concerning reciprocity previously mentioned, it seems that IT professionals do have some loyalty to the firms in which they work, but their loyalty is affected by the level of investment the firms make in them.

Overall, when asked what their preferences are pertaining to work environment/process, and work content/responsibility, all IT professionals expressed similar preferences. Essentially, three facets of organizational culture affect the motivation of IT professionals. First, an organization that fosters *open communication* is more likely to have a higher rate of retention among IT professionals. This is confirmed by the fact that the IT professionals from the consulting firms with the lower turnover rates all discussed the communicative environments in their organizations, whereas the IT professionals from the multinational organizations all remarked on the communication barriers in their organizations. The results of this study demonstrate that IT professionals are uncomfortable in bureaucratic environments where communication must follow a strict chain of command. Instead, they prefer to work in open environments where they are encouraged to handle work issues by contacting the individual directly accountable for their resolution. Thus, the retention decisions of IT professionals are affected by the extent to which the organizational culture eliminates artificial barriers to the communication process. This finding corroborates the work of Huselid (1995) which found that “communication-enhancing procedures” decrease turnover. For IT professionals, open communication starts upon their entry to the organization with the provision of realistic job previews, and continues throughout the organizational experience when opportunities to participate in decision-making are provided.

The extent to which IT professionals are permitted to *participate in decision-making* is the second facet of organizational culture affecting their motivation. The results of this study have corroborated Buckman’s (1995) research by demonstrating that IT professionals value the opportunity to participate in decision-making regarding all aspects of the work

environment and work process. All IT professionals stated that it is important to work in an organization where questions and suggestions are well-received and promptly followed up. For example, those who were exposed to feedback surveys indicated that responses to surveys should be followed up as soon as possible so that individuals feel that their opinions have been received and are being considered. They all expressed preferences for the availability and accessibility of immediate supervisors and HR managers, and for an environment which invites open communication so that individuals can feel free to voice concerns. One IT professional from Delta Networks stated that “people should be encouraged to speak out and supported when they do.”

On the other hand, all participating IT professionals expressed a dislike for working in organizations that restrict their opportunities to participate in decision-making pertaining to issues related to the work environment, work process, work content, and retention programs. As a matter of fact, the four IT professionals from the multinational corporations all expressed their dissatisfaction with not being able to openly communicate with immediate supervisors and the HR department, and with not being permitted a forum to discuss work process concerns and provide suggestions for process improvement. One IT professional noted that it is unfortunate that his feedback is not being considered because he feels his suggestions could positively affect the retention of IT professionals in the organization, while simultaneously decreasing expenses. It has already been mentioned that IT professionals do not view themselves as part of a broader organizational community, but as the focal points of the organizations in which they work. As independent contractors whose contributions are significantly tied to organizational productivity and profit, they believe that they should be

permitted to play a large part in decision-making. This belief is best demonstrated by the fact that a number of IT professionals mentioned that they are in the best position to create realistic product development deadlines, to formulate solutions pertaining to market release problems, and to decide which projects should be prioritized.

The third facet of organizational culture affecting the motivation of IT professionals involves *trust*. IT professionals dislike working in organizations where they feel they are not trusted to perform well in their jobs without tight supervision. For example, a number of IT professionals in this study noted that they are self-disciplined and feel personally accountable for the attainment of work objectives. Also, one IT professional remarked that she must perform well for the sake of her team members. IT professionals feel that the role of supervisor is to support them, not “sit on” them. This is best demonstrated by a comment made by one IT professional that his supervisor treated his team “like kids” by constantly reminding them of the procedure for answering support calls. The results of this study indicate that IT professionals like to be treated as autonomous, self-disciplined and trustworthy individuals. The importance of trust to IT professionals can also be seen in the reactions of those who had to pass a security exam before beginning work. They remarked that emphasizing secrecy was unnecessary because they understood the effect that security breaches would have on the organization. It is unclear at this point whether IT professionals are actually offended by policies and procedures that imply that they cannot be trusted, or whether they are citing trust issues as a means of thwarting organizational control measures and achieving more lenient work regulations. After all, one HR manager did mention that IT professionals were over-accommodated in their demands, and that they “get away with things other employees

wouldn't even dream of asking.”

Regarding issues that demotivate them, the IT professionals from multinational corporations all mentioned the lack of *recognition for achievements*. Rewards in these organizations are geared toward certain segments of the organization, namely those ultimately responsible for releasing products to market early. The lack of positive reinforcement caused by emphasizing recognition of those groups over others who contributed earlier in the process is a demotivating force for some IT professionals. To increase loyalty among IT professionals, organizations must ensure that recognition is given to all those who have made significant contributions. Therefore, the results of this study confirm those of the literature, which state that turnover decisions are affected by the extent to which employees feel valued as organization members and recognized for accomplishments (Leibowitz et al., 1985). Also, this study confirms Buckman's (1995) practitioner-based fieldwork results that found that motivation involves the recognition and respect of employees.

One interesting finding of this study is the belief among HR managers in the multinational corporations that productivity issues are more easily measured than motivational issues. All participating HR managers discussed their belief that IT professionals are intrinsically motivated by their work, but only those from consulting firms involved IT professionals in decision-making regarding work content. In fact, because of the large numbers of IT professionals employed in multinational organizations, it follows that they would have more difficulty involving them in the job design process. However, it should also be noted that in the case of IT professionals, there is not much room for organizational involvement in the job design process because these individuals are experts in their field, who work independently

on projects within the organizational framework. Most of the IT professionals in this study were part of teams responsible for their own budgets and accountable for meeting product release deadlines. Therefore, it is easy to understand why IT professionals view themselves as independent contractors within the organization, and why some organizations choose to neglect job design and work process issues. Differences between the larger and smaller organizations can perhaps be explained by the fact that IT professionals in smaller organizations identify more with the overall organizational culture, and consequently are less likely to view themselves as independent contractors. As well, the amount of direct interaction between the HR department in the smaller organizations can explain the partnership between the two parties in the job design process.

Overall, regarding the attainment of competitive advantage, the autonomous nature of IT positions prevents extensive organizational control over job design and work process issues. IT professionals are responsible for overall performance objectives and, to a great extent, self-manage job design and work process issues. Therefore, it is difficult for IT firms to implement strategies to enhance intrinsic motivation which differentiate them from competitors. Furthermore, the lack of control firms have over intrinsic motivational tactics like job design and work process affects their abilities to accrue retention benefits. Also, since intrinsic motivation is a factor relative to the individual, the issue of acquiring competitive advantage through imitation of corporate practices is moot. Thus, intrinsic motivational strategies as retention practices do not meet any of Pfeffer's (1994) three requirements for competitive advantage. Since there is very little chance of attaining competitive advantage in this area, intrinsic motivational strategies can also be regarded as "hygiene factors" (Herzberg, 1968),

which do not directly result in the retention of IT professionals, but do keep them from becoming dissatisfied with organization, which could eventually lead to turnover (see Figure 1 on page 188). The lack of opportunity to achieve competitive advantage in the area of intrinsic motivation illustrates the importance of other practices, such as orientation and career development, to retention.

The finding that intrinsic motivational strategies are “hygiene factors” is contrary to Herzberg’s theory of motivation. Herzberg (1968) found that intrinsic incentives, such as job enrichment, could be used by organizations to motivate employees. Perhaps this inconsistency is the result of both the time in which Herzberg’s theory was written and the job characteristics of IT professionals today. The original theory was developed at a time when task performance was more important than thought or initiative for most jobs, and “when managers told workers exactly what to do, and rulebooks told them how to do it” (Thomas, 2000, p. 11). Today’s jobs involve more of a self-management component. Presently, knowledge work accounts for a significant portion of the positions available in the labour market, and individuals are less accountable for the performance of individual tasks than they are for the attainment of specific objectives. This is particularly true for IT professionals, who are responsible for a wide range of tasks, and are given more autonomy to choose the activities that accomplish those tasks. For example, as has been previously noted, most of the IT professionals in this study were part of teams responsible for their own budgets and accountable for meeting product release deadlines. Therefore, the individual tasks involved in attaining the end result are not the focus in these organizations as much as the attainment of the end result itself. So, the concept of intrinsic motivational strategies has changed. Now, strategies like job design and work process

which were the focal point of Herzberg's recommendations, are beyond the scope of organizational control for IT professionals. In fact, intrinsic incentives like job design and work process are already integral components of IT jobs. So, because IT professionals self-manage job design and work process issues, organizations are limited in their ability to achieve competitive advantage by focusing on intrinsic incentives.

The results of this study have shown that IT professionals enjoy working with new technology and developing new products. Organizations still have some latitude to increase their satisfaction by designing positions that involve those aspects. However, because the nature of the technology industry is such that these types of positions are widely available, and because self-management is inherent in the job characteristics of IT professionals, job design and work process variables do not guarantee motivation, or, in the case of this study, retention. Thus, intrinsic motivational strategies can be considered "hygiene factors."

Compensation: The content of compensation plans varies according to *organization type*, although there are some commonalities between reward distribution strategies. In terms of financial rewards, all organizations use base salary as opposed to commission to financially reward IT professionals. Also, both consulting firms offer comprehensive insurance plans, educational allowances, profit-sharing, and paid vacations. Both multinational corporations offer insurance and retirement plans, and paid vacations. DataCom also offers educational allowances and corporate expense accounts for travelling. With regard to compensation, in terms of financial rewards, IT professionals expressed diverse preferences. Two discussed the need for a competitive salary, while two others expressed a preference for educational

allowances. Three IT professionals expressed a preference for paid vacation, while one expressed a preference for insurance and pension plans.

Also noteworthy, is the fact that all IT professionals stated that financial compensation is not as important to their retention decisions as are other factors. As a matter of fact, four IT professionals stated that money is less important to them than other job-related issues, such as time off, training, quality of life, and work experience. One remarked that he “would take a pay cut to have weekends off.” In addition, a number of IT professionals stated they would like to have the opportunity to take more vacation time during the year. In terms of *non-financial benefits*, the four IT professionals from consulting firms expressed a preference for flexible hours policies. The two IT professionals from Delta Networks also stated that they like the telecommuting policy in their company. The two IT professionals from Beta Imaging both expressed a preference for the casual dress policy. One IT professional from DataCom expressed a preference for flexible hours, while the other stated that he prefers the organization’s daycare facility. It is interesting to note that when asked what they feel should be the most important part of an organization’s compensation and benefits plan, all participating IT professionals discussed non-financial benefits. For example, flexible hours, training, time off, telecommuting, and daycare facilities were discussed by IT professionals. Thus, training, job experience and quality of life are more important to the retention decisions of IT professionals than is financial compensation.

Regarding reward distribution, the four IT professionals from consulting firms indicated that they are satisfied with the types of rewards offered in their organizations because a balance between competitive salary and non-financial benefits is offered. The IT

professionals from the multinational corporations who indicated that they are dissatisfied with the types of rewards offered, stated that this is because non-financial benefits such as time off and recognition for achievement are not offered in their organizations. This seems to be another indication of the importance of non-financial benefits to IT professionals. Also, the importance of non-financial benefits is illustrated by the fact that six IT professionals said that they are motivated more by non-financial benefits than by financial benefits, while two noted that they are more motivated by a balance of both.

When asked if they are satisfied with the types of non-financial benefits provided by their organizations, only the IT professionals from the consulting firms answered affirmatively. All four IT professionals from the consulting firms expressed a preference for the diversity of non-financial benefits offered by their organizations. Also, all IT professionals from consulting firms expressed a preference for the sense of independence they attain from the flexible hours policies offered in their organizations. When asked which non-financial benefits they prefer, five IT professionals expressed a preference for flexible hours, and all IT professionals expressed the need for time off to balance personal and work needs. When asked which reward they most value, four IT professionals discussed time off, three discussed training opportunities, and one discussed flexible hours as the most valued reward.

A further illustration of the importance of non-financial benefits to IT professionals is seen in the fact that six IT professionals indicated that the most important need affecting their retention decisions is access to training opportunities, while two stated that the most critical need affecting their retention decisions is the opportunity to have time off. In particular, quality of life benefits are critical. For example, three IT professionals stated that the chance

to have a good *quality of life* is the most important factor affecting their commitment to an organization because enjoying a personal life outside the company permits relaxation and the ability to perform at work with renewed energy. In addition, a number of IT professionals discussed their needs for more time off and flexible hours. Since the IT professionals interviewed ranged in age from 20 to 34 years old, their responses corroborate findings in the literature which state that quality of life benefits are critical to enhancing the retention of Generation X employees (Ermel & Bohl, 1997; Lineberry & Trumble, 2000). Once again, none of the IT professionals in this study mentioned financial rewards as the most critical needs affecting their retention decisions, so it is clear that including non-financial benefits as incentives will affect retention. As a matter of fact, all participating IT professionals expressed a dislike for retention strategies which emphasize financial compensation to the exclusion of quality of life benefits.

In contrast, all the HR managers in this study indicated that they feel that money is the most valued reward for IT professionals overall. It should be noted, however, that other than the results of exit interviews, none of them stated that they had used any form of research to ascertain IT professionals' opinions concerning reward strategies. Their perceptions in this area are based on intuition and behavioural observations. This study's demonstration of the importance of non-financial benefits to IT professionals is important for organizations whose compensation strategy emphasizes the financial component because, in fact, turnover may actually be caused by employees leaving to take advantage of non-financial benefits in other organizations. After all, one IT professional did mention that there was no point in having a high salary if there is no time to enjoy it.

It appears that the IT professionals in this study realize the importance of successfully coping with stress, and as such are more committed to organizations that show their “respect for the total being” by providing quality of life benefits. The element of *reciprocity* surfaces again here. IT professionals understand the direct connection between their performance and the attainment of organizational goals. They believe that their significant contribution to organizational performance merits certain rewards to help them cope with job stress, namely quality of life benefits such as extra time off, flexible hours, and telecommuting. Evidence of this belief is best demonstrated by a comment made by one IT professional from Delta Networks, who said that “I give 150% to my job, so I deserve quality time with my family when I want it.” In fact, the increased value placed on quality of life benefits by IT professionals could be the result of the fact that they require such benefits to cope with job stress.

Even though IT professionals’ loyalty is affected by the extent to which companies provide diverse non-financial benefits, there is still evidence of their need to be independent. This is best demonstrated by their reactions to employee assistance programs. None of them reported ever having participated in an employee assistance program. Some even reacted with distrust to the programs offered by their organizations, as can be seen from the remark made by the IT professional from Beta Imaging that employee assistance programs are just an excuse the company uses to “get the dirt on people” and fire them. So, it appears that IT professionals do not trust the motives behind the use of employee assistance programs and, as such, believe that personal situations are best handled outside the boundaries of the organization. Some IT professionals in this study viewed employee assistance programs as mechanisms for inducing

dependence on the organization, and employees who use them as not cut out for careers in the IT field. For example, an IT professional from Delta Networks stated that IT professionals who need to attend the company's stress management program are "better off rethinking" their careers in consulting.

Another demonstration of IT professionals' needs to independent is seen in the fact that job security does not affect their retention decisions. Five of them stated that job security has the least effect on their commitment to continuing to work for a company. Instead, the IT professionals in this study seem more concerned with acquiring job experience and having the opportunity to work with as many types of technology products as possible. For example, one IT professional from Alpha-Med Consulting stated that preoccupation with job security interferes with the ability to take the risks required to develop a quality product. Perhaps IT professionals are concerned that depending on organizations for job security will cause them to neglect their own career development.

Although all participating HR managers stated that they believe financial compensation to be the most important reward overall for IT professionals, their non-financial benefits plans indicate that they are also aware of the importance of non-financial incentives. All organizations make the effort to create innovative non-financial incentives to enhance the retention of IT professionals. For example, Alpha-Med Consulting offers a concierge service for IT professionals who frequently travel. Beta Imaging offers employee assistance programs for IT professionals requiring stress management, marital, or substance abuse counselling. DataCom offers a day care facility, company outings, and anniversary packages, and Delta Networks offers "beyond the call of duty" awards and is in the process of launching a new

project rotation program.

An interesting finding of this study that although all HR managers repeatedly remarked on the importance of continually revising non-financial benefits to accommodate changing industry trends, only those from the multinational corporations indicated that there have been recent changes to the non-financial benefits policies in their organizations. Since the HR managers from the multinational firms indicated that it was important to have retention strategies that compare to those of competing organizations, the recent changes to non-financial benefits plans could be a reflection of adjustments to conform to new trends in the market. However, merely *matching competitors' strategies* does not ensure competitive advantage for organizations (Pfeffer, 1996). Instead, as has been previously mentioned, they should strive to differentiate themselves from competitors to enhance retention among IT professionals. A number of IT professionals in this study noted the abundance of opportunities to increase their salary, however, they also mentioned that having a high salary is not as important to them as balancing their work and personal lives. Although their attraction to quality of life benefits may only be the result of conditions in the labour market, organizations would do well to continue to be creative about non-financial benefits in the event that it is actually a reflection of the Generation X demographic which will persist.

As has been previously demonstrated, IT organizations are attempting to create innovative non-financial incentive plans to enhance retention. However, they are somewhat constrained in their abilities to differentiate themselves from competitors simply because non-financial benefits are commonplace in today's IT organizations. For instance, all participating organizations have casual dress policies. Both consulting firms offer flexible hours options.

Alpha-Med Consulting and DataCom offer telecommuting options, and Beta Imaging and Delta Networks offer some type of employee assistance programs. It must be noted, however, that although organizations will face challenges when trying to differentiate their non-financial benefits plans from competitors, offering non-financial benefits does affect retention. So, organizations would do well to continue their efforts to differentiate themselves from competitors in this area. In particular, benefits such as flexible hours and increased vacation time are cheaper and more effective alternatives than trying to compete by offering more lucrative monetary incentives.

On the whole, the provision of non-financial benefits like flexible hours can be source of competitive advantage to IT organizations (see Figure 1 on page 188). For example, by offering quality of life benefits that conform to the needs of the internal work force, organizations can create customized plans that enhance retention, and that differentiate themselves from competitors. Because they are based on the needs of IT professionals in the organization, customized non-financial plans meet the requirements of sustainable competitive advantage (Pfeffer, 1994) in that they are differentiable from competitors' strategies, and they are not readily duplicated. In addition, the results of this study indicate that the provision of quality of life benefits is beneficial because it affects the commitment of IT professionals. Furthermore, attaining commitment by emphasizing non-financial alternatives to compensation could result in cost savings for organizations, as was previously mentioned.

However, other than being creative about providing non-financial benefits, organizations are limited in their opportunities to attain competitive advantage in the area of financial compensation strategy. First, in terms of differentiating themselves from competitors,

organizations cannot enhance their retention rates among IT professionals by offering higher pay because lucrative financial packages are widely available in the IT industry today. Second, in terms of strategies being duplicated by others, because competitors can match pay rates, there is not much room for IT organizations to manoeuvre in the area of financial compensation. Third, in terms of strategies being beneficial, the abundance of job opportunities and escalating pay rates in the industry have lessened the effect of financial compensation on the retention decisions of IT professionals. Thus, although it is a necessary component of a comprehensive retention strategy, financial compensation does not meet any of the requirements of sustainable competitive advantage. As such, financial compensation can also be perceived as a “hygiene factor” (Herzberg, 1968) which does not directly result in the retention of IT professionals, but does keep them from becoming dissatisfied with the organization, which could eventually lead to turnover (see Figure 1 on page 188). The lack of opportunity to achieve a competitive advantage in the area of financial compensation illustrates the importance of using other practices to enhance retention, such as orientation, career development, and non-financial benefits.

Feedback/Evaluation: All participating organizations periodically evaluate their orientation, training, career development, and compensation programs. Regarding the evaluation of retention strategies as a whole, all participating HR managers indicated that organizational strategies involving the retention of IT professionals are periodically evaluated. All HR managers stated that the overall retention strategy evaluation process is separate from the evaluation of the content of retention programs. Specifically, Alpha-Med Consulting, Beta

Imaging, and DataCom evaluate their overall retention strategies once per year to determine the distribution of organizational spending, and possible shifts in strategic emphasis pertaining to organizational retention strategies. The HR manager from Delta Networks stated that the company's overall retention strategy is constantly being evaluated and reworked to keep up with industry trends.

The use of cost/benefit analysis to link retention practices to outcomes is limited. Only the consulting firms use the method as part of the evaluation process, and in both cases, HR managers expressed a lack of familiarity with the technique. Specifically, Alpha-Med Consulting uses it to determine the effectiveness of orientation, training, career development, and compensation programs, although the HR manager from the organization is not involved in the process and is not certain about how it is used in the evaluation process. Delta Networks only uses cost/benefit analysis to evaluate training programs. Participating multinational corporations made no mention of attempting to link retention practices with outcomes, even by using qualitative techniques. In order to ensure that retention practices are effective, organizations must first attempt to link such practices to outcomes. Then, they must attempt to analyse the cost of the practices and place a dollar value on the benefits accrued as a result of their implementation.

The use of survey feedback from IT professionals as part of the evaluation process differs across the four organizations. For example, Alpha-Med Consulting and DataCom use survey feedback to evaluate orientation, training, and career development programs. Delta Networks uses survey feedback to evaluate orientation, and training programs, and Beta Imaging only uses survey feedback results to evaluate training programs. Completion of survey

feedback instruments is mandatory in DataCom, and is optional in the other organizations.

It has previously been mentioned that IT professionals expressed preferences for the ability to provide feedback about work issues and retention strategies that is well received and followed up. According to the results of this study, they enjoy contributing to work environment and policies, and value an environment that fosters *open communication and participation in decision-making*. When asked how important the feedback and evaluation process is to their retention decisions, all IT professionals stated that the ability to provide suggestions and express concerns is just as important as receiving regular performance feedback. In addition, when asked what they feel should be the most important aspect of an organization's feedback and evaluation program, six IT professionals discussed the necessity of being allowed an outlet for providing suggestions and expressing concerns about work process and environment. Two IT professionals discussed the necessity of sponsoring open communication between IT professionals and their immediate supervisors regarding work process, and the importance of having IT supervisors who respect their ability to make decisions about how their work is done. Therefore, to increase retention, organizations must provide opportunities for the provision of feedback and suggestions for improvement.

For IT professionals, the ability to participate in decision-making involves being informed of organizational objectives and participating in the design of procedures and programs to meet those objectives. They value the opportunity to provide feedback and suggestions for improvement. For instance, the four IT professionals from Beta Imaging and DataCom stated that they feel powerless to affect policymaking regarding retention in their organizations because of limited opportunities to provide feedback.

The literature has shown that survey feedback instruments are valuable mechanisms for enhancing retention rates (Hirschfield, 1991; Huselid, 1995; Lyne, 1989; Snow-Antle et al., 1989). The results of this research have also demonstrated the importance of using survey feedback instruments, but it must be noted that for IT professionals, *follow-up* on survey results is necessary. For example, the IT professionals from the two multinational corporations expressed a dislike for the lack of follow-up on their feedback. One stated that he has decided to stop wasting his time filling out surveys because he feels his concerns and suggestions are ignored. To affect retention decisions, organizations must demonstrate their appreciation for feedback provided by the IT professionals, and must communicate the effect that their suggestions have had on organizational performance. As a matter of fact, all participating IT professionals indicated that the best way an organization can demonstrate concern for their needs is to foster open communication and follow up on questions, concerns, and suggestions provided through both formal and informal feedback mechanisms.

It is important to mention, however, that although IT professionals value the opportunity to participate in decision-making, they only wish to participate in areas of direct concern to themselves. For example, regarding orientation, they preferred an emphasis on job specific information and an introduction to their work colleagues instead of an introduction to general organizational policies and procedures. Also, two IT professionals expressed a dislike for having to provide feedback about training programs that are not relevant to their jobs. This reinforces the conclusion that IT professionals view themselves as independent contractors in their organizations.

All the HR managers from participating organizations indicated that information about retention programs is regularly communicated to IT professionals, however, it seems that the consulting firms in this study tend to use more informal means of communication than do the multinational corporations. This may be because HR managers are more directly involved with IT professionals on a daily basis in the consulting firms. Also, the IT professionals from the participating consulting firms indicated that they feel their opinions about work process are valued and appreciated because they are permitted to express their opinions and provide suggestions, and their feedback is well-received and has resulted in improvements. In contrast, the IT professionals from the participating multinational corporations stated that they feel their opinions are ignored, and do not result in changes to work process. For example, the use of training surveys demonstrates that the HR manager at Beta Imaging has a superficial understanding of the importance of acquiring feedback regarding the preferences of IT professionals to increase retention. However, it is not enough to simply make the surveys available. To be effective, the results must be examined to pinpoint areas requiring improvement. At Beta Imaging, the results of the training surveys are not examined, leaving IT professionals feeling that people in the organization do not care about the effect turnover has on their morale. As a result, IT professionals stop completing the surveys because they do not result in improvements, and the organization misses the opportunity to derive any benefits from their feedback. Therefore, increasing retention is not simply a matter of providing IT professionals with opportunities to give feedback and make suggestions for process improvements, but it involves recognizing their efforts to provide input, outlining the ways in which their feedback has resulted in improvements, and honestly discussing the reasons why

certain suggestions have not been implemented.

Organizations can enhance retention by encouraging the participation of IT professionals in decisions pertaining to the retention practices targeted toward them. The lack of follow-up on feedback from IT professionals in multinational corporations could be the result of their size, which limits the ability of HR managers to tailor surveys to the needs of employees, and to discuss results. Once again, decentralizing the HR function to the department level would make the feedback process more manageable. Decentralization would result in surveys being tailored to the “local” needs of departments, and would make it easier for HR managers to follow-up on results.

Feedback as a retention practice meets the three requirements for competitive advantage delineated by Pfeffer (1994). By allowing IT professionals to participate in decision-making organizations create cultures based on reciprocity, which differentiates them from competitors. It has previously been noted that cultural variables are not easily imitated by competitors because such variables are usually components of an overarching system, and the ability to duplicate an entire system of management practices is “hindered by its very extensiveness” (Pfeffer, 1994, p. 16). Also, the responses of IT professionals in this study have illustrated that the practice of acquiring and following up on feedback from IT professionals can be beneficial to organizational retention rates. Thus, designing innovative methods of acquiring feedback from IT professionals, and following up on their suggestions and comments can result in sustainable competitive advantage for IT organizations (see Figure 1 on page 188).

To conclude, the results of this study show that orientation, career development, non-financial benefits and feedback are areas where IT organizations have room to develop competitive advantage in terms of retention. On the other hand, training, financial compensation and strategies designed to enhance intrinsic motivation, such as job design are necessary “hygiene factors” , but are not sufficient to engender loyalty to the firm and keep IT professionals from moving to competing organizations.

Barriers to Using the Retention Practices Effectively

It was originally expected that the implementation barriers discussed by Terpstra & Rozell (1997), namely, lack of familiarity, beliefs concerning usefulness, and resource constraints, would affect the ability of IT organizations to implement all six retention practices. However, the results of this study indicated otherwise. Actually, only one organization elected not to implement one of the practices suggested in the literature. Specifically, Beta Imaging did not have an orientation program for IT professionals. All other participating organizations were implementing the six retention practices, so, overall, no barriers were found to affect the implementation of retention strategies that include all six practices. Instead, however, some barriers were found to affect the organizations’ abilities to effectively use the retention practices. The results of this study indicate that organizational size, structure, and culture, as well as conditions in the job market affect the implementation of both the practices associated with competitive advantage, and the necessary “hygiene” practices. In addition, the ability of organizations to effectively implement each of the sets of practices is affected by the existence of certain barriers. Specifically, the effective use of the

“hygiene factors” is affected by barriers pertaining to limited resources, beliefs concerning usefulness, and job characteristics. The effective use of the practices that confer competitive advantage is affected solely by beliefs concerning usefulness (see Figure 1 on page 188). It should be mentioned at this point that the effects of resource constraints and beliefs concerning usefulness are similar to those noted in the work of Terpstra & Rozell (1997). However, the results of this study also illustrate the effects of barriers caused by organizational size, structure, culture, and job characteristics.

First, *size, structure, and culture* are barriers that affect the ability of organizations to effectively use both the practices that confer competitive advantage, and the “hygiene” practices. In fact, the latter variables are interconnected, and affect the extent to which organizations can fully implement retention practices, as well as the methods chosen for implementation. For example, cultural factors affect an organization’s willingness to realize the full potential of their retention programs. Primarily, as has been previously noted, organizational culture affects the content and delivery of all six retention practices. However, it also affects the extent to which organizations invest in particular practices. For instance, both HR managers from Beta Imaging and DataCom discussed their beliefs concerning the usefulness of extensive investment in training and career development programs in terms of return on investment. Although pervading beliefs were used to justify a lack of increased investment in the latter areas, it can also be said that the cultures of both organizations were such that IT professionals were not trusted to be loyal. After all, both HR managers stated that an adequate return on investment would not be achieved because IT professionals would continue to quit regardless of the amount of money invested. Perhaps this type of distrust was

the result of size and structure. The results of this study have demonstrated that the larger the organization, the less opportunity for direct interaction among IT professionals and the HR department. Perhaps HR managers were reluctant to trust in their ability to gain the commitment of IT professionals through investment in their development because they did not have enough direct contact with them to be certain of their intentions.

A decentralization of the HR function to the departmental level is one way that organizations can deal with cultural issues caused by size and structure. HR managers who have more opportunities to interact with IT professionals on a daily basis will be in a better position to shape organizational commitment. For example, investment decisions about training and career development will be more manageable because of the smaller number of IT professionals requiring needs assessments, and because of the awareness of intentions created by increased interaction.

The results of this study also demonstrated that culture and size impeded the ability of larger organizations to effectively design and implement intrinsic motivational strategies. It has previously been mentioned that the multinational corporations in this study do not focus on providing incentives intended to increase intrinsic motivation. Instead, they focus primarily on increasing productivity. This is best demonstrated by a remark made by the HR manager of DataCom, that focusing on the needs and comfort levels of IT professionals only results in a “distraction” from more important productivity issues. In addition, the HR manager from Beta Imaging said that survey feedback regarding factors that motivate IT professionals is irrelevant, and only serves to increase spending in areas which do not affect productivity. It is not clear whether the size of these organizations causes them to have a culture that fails to

appreciate the effect of motivation on retention decisions, or whether both multinational participants simply had this type of culture in common. Although the nature of IT professionals' jobs make discussions about job design ineffective motivators, other intrinsic motivational strategies such as participation in decision-making regarding work environment and responsibility are necessary for satisfaction nevertheless. Once again, decentralizing the HR function will permit larger organizations to offer more effective intrinsic incentives geared toward the local needs of the department.

Job market conditions also affect the use of both "hygiene factors" and practices that confer competitive advantage. Primarily, the tightness of the labour market and the aggressive competition between organizations for IT professionals had an effect on the content of retention strategies and programs. Results of this study have shown that organizations are constantly comparing their retention strategies and programs to those of competitors to ensure that they are maintaining standards consistent with those of the market. For instance, the effect of job market conditions on pay rates, training opportunities, and non-financial benefits has been previously noted.

However, another interesting finding of this study concerns the relationship between conditions in the job market and communication. It appears that job market conditions impede the communication process in certain organizations. Because of the aggressive competition between organizations for IT professionals, some have chosen not to communicate about retention strategies rather than to risk those strategies being leaked to competitors. For example, both HR managers from the multinational corporations stated that survey feedback is not solicited from IT professionals about compensation and benefits because of concerns

about the confidentiality of compensation plan content. In addition, some HR managers expressed that communication about retention programs is affected by other organizational priorities. For example, the HR manager from Alpha-Med Consulting stated that she has other responsibilities that affect the amount of time she is able to spend communicating the availability and content of retention programs to IT professionals. In sum, size and structure intertwined to form the foundation for organizational culture which, in turn, affected the ability of organizations to effectively use both the necessary “hygiene factors” and the retention practices that confer competitive advantage. Also, job market conditions had an effect on both the content of retention strategies and programs, as well as on the communication process regarding retention strategy.

Second, the effective use of the “hygiene factors” was affected by barriers pertaining to limited resources, beliefs concerning usefulness, and job characteristics. Primarily, *limited financial resources* affected organizations’ abilities to effectively use training and financial compensation as retention practices. Limited financial resources affected the ability of organizations to keep up with trends pertaining to financial compensation. Today’s high demand for IT professionals has resulted in a job market characterized by escalating compensation packages. Limited financial resources affect the capacity of organizations to continually beat competitors’ offers. For instance, one HR manager mentioned that her organization could no longer match offers being made by a competing firm. In addition, the HR managers from the multinational corporations stated that they believed increasing pay packages would increase retention rates, but cost cutting measures impeded their ability to make such offers to IT professionals.

The effects of limited financial resources were also evident in the case of training, where HR managers discussed the diverse requirements of IT professionals. For instance, the HR manager from Alpha-Med Consulting stated that she felt that the training requests of all IT professionals should be equally accommodated in the organization, but that limited financial resources creates the need to prioritize them on the basis of urgency instead. The rapid pace of technological change also affects the capacity of organizations to keep up with training needs. Overhead costs of providing training are high for IT professionals. For example, organizations must continually invest in training materials to ensure their IT professionals are up to date with trends in the marketplace. Upgrading constantly evolving technology is a costly issue for IT organizations. This is best demonstrated by a comment made by an HR manager who said that in-house computer labs and software libraries must be upgraded once a year if an organization really wants to be “on the cutting edge.”

It is easy to see how larger organizations can have trouble meeting training requirements because they must accommodate a larger number of people working on many different types of projects requiring many different skills. As well, the simple task of determining training needs is more difficult in larger organizations because of the sheer number of IT professionals whose needs must be assessed. Also, organizations with high turnover rates are forced into a vicious cycle when they try to continue to train their IT professionals. For example, the HR manager from DataCom stated that although comprehensive seminars for company products should exist for new employees, repeating them each time IT professionals quit is too expensive a process for the organization to undertake. This puts these organizations in the position of trying to control their turnover rate

before increasing their investment in training. Because training is so important to IT professionals, however, it is possible that turnover will not be controlled as long as organizations choose to decrease their investment. This is not to say that it is impossible for organizations to keep up with training requests while adhering to budgetary restrictions. In fact, it may be possible to enhance the retention of IT professionals if extra training is used as a reward for their loyalty and good performance. Thus, limited financial resources affect the ability of organizations to effectively use the “hygiene factors” of financial compensation and training.

Beliefs concerning usefulness are also barriers that affect organizations’ abilities to effectively use one of the “hygiene” retention practices. In particular, the results of this study have shown that pervading beliefs among HR managers affect investment in training programs. The effect of pervading beliefs on training programs is best demonstrated by the HR managers’ justification for not increasing spending on certain training facilities and programs because of the lack of return on investment. For example, the HR manager from Beta Imaging justified the lack of investment in additional computer-based training workshops because of her belief that extra training does not result in increased return on investment in the form of enhanced retention. The same type of argument was used by the HR manager at DataCom to justify not investing in training on externally developed products. In particular, he noted that increased investment in training on external products would give IT professionals the leverage they needed to move to competing organizations. It should also be noted at this time that pervading beliefs also affect the evaluation of retention strategies and programs. In particular, one belief affects organizations’ full implementation of the evaluation process. A number of HR

managers expressed the belief that many facets of retention strategies and programs were not conducive to quantitative measurement. As a result, evaluation processes which included quantitative techniques such as cost-benefit analysis were underused. For instance, the HR manager from DataCom remarked that cost/benefit analysis was not a useful evaluation method for retention strategies and programs because “people issues cannot be measured.” Thus, pervading beliefs are barriers that affect organizations’ abilities to effectively use the “hygiene” retention practice of training.

A final barrier to the effective use of one of the retention strategies termed a “hygiene factor” involves *job characteristics*. It has previously been noted that the autonomous nature of certain IT positions limits the amount of control organizations have over issues related to work process and job design. In the case of IT professionals, there is not much room for organizational involvement in the job design process because these individuals are experts in their field, who work independently on projects within the organizational framework. Most of the IT professionals in this study were part of teams responsible for their own budgets and accountable for meeting product release deadlines. Therefore, it is easy to understand why job characteristics constitute barriers to the effective use of intrinsic incentives, such as job design and work process. In sum, barriers associated with limited financial resources, pervading beliefs, and job characteristics impede the effective use of retention practices considered to be “hygiene factors”.

Third, barriers caused by *beliefs concerning usefulness* also affect the abilities of IT organizations to effectively use the retention practices that confer competitive advantage. In particular, pervading beliefs influence organizational investment in career development, the

feedback process, and the provision of quality of life benefits. Regarding career development, it has previously been noted that it is underutilised as a retention practice because HR managers feel that it does not produce an adequate return on investment. As a matter of fact, the HR manager from DataCom stated that investing in career development is “tantamount to shooting ourselves in the foot” because it creates an awareness among IT professionals of their leverage in the job market, and implies that better alternatives are available for them outside the organization.

Pervading beliefs also acted as barriers to the effective use of feedback as a retention practice. The results of this study demonstrated that timely follow up on feedback from IT professionals affected their retention decisions. Yet the multinational corporations in this study did not ask for feedback from IT professionals concerning a number of issues, and also neglected to follow up concerning feedback that was solicited. Perhaps the lack of a comprehensive feedback process in the multinational corporations can be explained by the fact that the HR managers from these firms believed that feedback from IT professionals was only useful if it related to factors tied to productivity. For example, one HR manager stated that other than regarding training, feedback from IT professionals was “useless and irrelevant” because it did not affect the efficiency of the firm.

In addition, barriers caused by pervading beliefs affect both the types of non-financial benefits offered in IT organizations and the ability of IT organizations to achieve competitive advantage in the area of quality of life benefits. Primarily, pervading beliefs influenced by organizational culture affect the types of non-financial benefits offered to IT professionals. The IT organizations in this study provided a number of unique non-financial incentives

influenced by their cultures. For example, flexible hours programs, daycare facilities, concierge services, and employee assistance programs were all examples of non-financial benefits discussed by HR managers and IT professionals alike.

However, in addition to affecting the types of non-financial benefits offered, pervading beliefs also affect the ability of organizations to recognize that customized quality of life benefits could be a significant source of competitive advantage in the area of retention. For example, all participating HR managers assumed that they had to match the retention strategies of their competitors, with the bulk of spending going toward financial compensation. Their emphasis on the centrality of financial compensation is based on the assumption that it is the most critical factor affecting the retention decisions of IT professionals. As a matter of fact, for various reasons, all participating HR managers in this study reported that money was the factor that had the most effect on an organization's ability to retain IT professionals. In fact, had the HR managers informed themselves about the preferences of IT professionals, they would have realized the importance of quality of life benefits as a source of competitive advantage. In sum, barriers caused by pervading beliefs influence organizational investment in career development, the feedback process, and quality of life benefits.

With the leadership of senior management, it is possible to change pervading organizational beliefs. Such a change would involve altering the organizational culture. For example, an overarching vision would have to be created and articulated throughout the organization, and would have to be reinforced through the creation of strategic HR policies, and the supervision of HR managers. The positive effects of decentralizing the HR function on organizational culture and the commitment of IT professionals have previously been

discussed. However, it should also be noted that because of its effect on organizational culture, the decentralization of human resources to the department level also affects pervading beliefs. In fact, decentralizing the HR function could result in changes to the pervading beliefs which are barriers to the effective use of both “hygiene factors” and practices that confer competitive advantage in the area of retention. For example, the awareness of intentions and needs created by daily interaction could change beliefs concerning the usefulness of investing in career development and certain types of training.

Because pervading beliefs are the only barriers affecting the practices that confer competitive advantage, and because they can be changed by addressing cultural issues, it can be said that the barriers affecting the use of retention practices that confer competitive advantage are more easily surmountable than those pertaining to the “hygiene factors”. It has previously been noted that IT organizations face three types of barriers to the effective use of the retention practices considered “hygiene factors.” While barriers associated with pervading beliefs can be changed, organizations are rather constrained in their abilities to deal with limited financial resources and the job characteristics of IT professionals. The fact that the latter two barriers affecting the “hygiene factors” are more difficult to change illustrates the importance of focusing on the retention practices that confer competitive advantage.

To conclude, the results of this study indicate that organizational size, structure, and culture, as well as conditions in the job market affect the implementation of both the practices associated with competitive advantage, and the necessary “hygiene” practices. In addition, the effective use of the retention practices considered to be “hygiene factors” is affected by barriers pertaining to limited resources, pervading beliefs, and job characteristics. Also, the

results of this study indicated that the effective use of the practices that confer competitive advantage is affected solely by pervading beliefs. Although, organizations are rather constrained in their abilities to deal with limited financial resources and the job characteristics of IT professionals, they are in a better position to change pervading beliefs by addressing cultural issues.

Practical Implications for HR Managers

Although this study has described many pertinent findings for HR managers to consider, four issues seem to have the most effect on the successful control of retention rates in IT organizations. The four issues are the availability and accessibility of HR managers, a work environment fostering open communication, the inclusion of IT professionals in decision-making, and the provision of a variety of non-financial or quality of life benefits. In the two consulting firms where HR managers state that these four factors are present, retention rates are higher than in the multinational corporations, where IT professionals note that these four factors are lacking.

Regarding *availability and accessibility*, organizations in which HR managers have more direct contact with IT professionals on a daily basis, or make themselves available to discuss the comments, questions, and suggestions of IT professionals about work issues are more likely to have lower turnover rates among IT professionals. Therefore, to enhance the retention rates of IT professionals, HR managers should attempt to increase their level of direct contact with IT professionals. As has been previously mentioned, in larger organizations, decentralizing the HR function to the department level is an effective way of increasing the

level of interaction between IT professionals and HR managers.

Regarding *open communication*, HR managers are advised to create a work environment that fosters as many opportunities as possible for IT professionals to communicate their concerns and suggestions directly to individuals at all levels of the organizational hierarchy. IT professionals value the opportunity to interact and resolve work process issues with organization members from all departments and branches. Lack of bureaucratic procedure and smooth communication flow are viewed by IT professionals as valuable components of work process which lead to more effective job performance. Open communication is best achieved by informing IT professionals about the functions and accountability of all departments, and by providing them the opportunity to freely exchange ideas with all organization members. Again, in larger organizations, decentralizing the HR function to the department level eliminates barriers to the communication process which can be the result of size and structure.

Regarding *participation in decision-making*, HR managers should be aware that IT professionals value the opportunity to provide input about issues ranging from the work environment, work content, and work process, to the content of retention programs. Participation in decision-making is best achieved by giving them as many opportunities as possible to provide formal and informal feedback to immediate supervisors and HR managers. In turn, IT professionals' opinions and perspectives must be well-received by immediate supervisors and HR managers, and must be followed up in a timely manner. HR managers and immediate supervisors must demonstrate to IT professionals that their suggestions have been considered, and are valued and appreciated. In most cases, timely follow-up explanations and

recognition for suggestions resulting in improvements are the best ways of demonstrating the value placed by the organization on the participation of IT professionals in decision-making. It bears repeating that barriers to competitive advantage caused by size, structure, and culture that impede the inclusion of IT professionals in decision-making can be overcome through the decentralization of the HR function.

Another finding of this study which can have major implications for HR managers attempting to control the retention rates of IT professionals is *the importance of non-financial or quality of life benefits*. Across the board, all participating IT professionals in this study indicated that non-financial benefits had more effect on their commitment to an organization and their retention decisions than financial compensation. In contrast, all participating HR managers indicated that they believe financial compensation has the greatest effect on IT professionals' retention decisions. Also, all participating HR managers stated that more funding is being given to financial compensation programs than to the provision of non-financial benefits programs. The results of this study demonstrate that HR managers must take into account the importance of emphasizing the non-financial benefits component of compensation programs. As has been previously mentioned, to achieve competitive advantage in the area of compensation, HR managers should ensure that diverse non-financial benefits are offered to IT professionals. For example, participating IT professionals expressed the need for more time off and flexible hours programs to balance their work and personal lives, so offering these types of incentives would be a step in the right direction.

The results of this study also indicate a lack of *research about the needs and preferences of IT professionals* regarding retention strategies and programs. This author recommends that HR managers perform more research to determine the effectiveness of existing programs and strategies, and the areas requiring restructuring and improvement. Research in this area could result in significant cost savings for organizations. For example, in the case of orientation, all participating IT professionals expressed a preference for emphasizing a thorough departmental orientation. However, all organizations spent the least amount of time orienting IT professionals to their specific departments, and the most amount of time implementing the general organizational orientation. Since departmental orientations are less costly, HR managers may be better served by decreasing the amount of time IT professionals spend in general orientation sessions, and increasing the amount of time they spend being introduced to their particular work environment and colleagues. This would increase the satisfaction of IT professionals with organizational orientation, while simultaneously decreasing costs. Also, in the case of compensation, all organizations in this study spend more on pay packages than on non-financial benefits. Continuing to increase salary is a more expensive alternative than providing a flexible hours policy. Thus, once again, research on the needs and preferences of IT professionals can result in both cost savings, and an increase in the organizational commitment of IT professionals. Therefore, HR managers should make a solid effort to determine the needs and preferences of IT professionals in their organizations with respect to retention strategies and programs.

Thus, ensuring the availability and accessibility of HR managers, fostering open communication in the work environment, including IT professionals in decision-making, and providing of a variety of non-financial or quality of life benefits, can help IT organizations successfully control retention rates.

Conclusion

A Discussion of the Best Practice Retention Model: What has been learned?

At this point, the Best Practice Retention Model based on the literature must be reassessed. Data gathered from the questionnaires and interviews have been used to revise the model. Specifically, the preceding analysis has led to the development of a set of recommendations organizations can use to control retention.

The results of this study have demonstrated that retention strategies are the result of the interaction between three elements: socioeconomic conditions; the organization; and IT professionals. Relevant variables pertaining to socioeconomic conditions are labour market conditions and trends. Relevant variables pertaining to the organization are resources, size, structure, and cultural variables, such as reciprocity and communication. Relevant variables pertaining to IT professionals are age, perceptions of industry trends, performance requirements, training and development needs, and incentive expectations.

The first focus of this study has been the effects of the six best practices on the retention of IT professionals. The second focus has been the barriers experienced by organizations trying to implement the six practices, and the perceptions of IT professionals

which affect their retention decisions. Before discussing the main findings of the study, it is important to note that the data provided support for the fact that socio-economic issues have resulted in the need to enhance retention rates in IT organizations. Specifically, the Best Practice Retention Model stipulates that the main socio-economic issues affecting the need for comprehensive retention strategies in IT organizations are the skilled labour shortage, high turnover in the IT industry, and the emergent trend of work/life balance. It should be noted that at some point in providing responses to questionnaires or to interview questions, all participating HR managers discussed the shortage of IT professionals and the high level of turnover in the IT industry, and all stated that to effectively compete in the IT labour market, organizations must have well-designed retention strategies. It should also be noted that labour market conditions and trends influence organizations' design of retention strategies, and that the age and perceptions of IT professionals about industry trends affect their expectations, needs, and retention decisions. Although the original Best Practice Retention model did include the influence of the environment on organizational retention strategies, it did not include the effect of environmental conditions on the needs and expectations of IT professionals. Thus, future retention models should include the link between IT professionals and the socioeconomic environment.

The main findings of this study serve on the one hand to validate the Best Practice Retention Model, and on the other, to necessitate revisions to it. At first glance, the study's results illustrate that the Best Practice Retention Model is a successful attempt at enhancing the retention rates of IT professionals. This is demonstrated by the fact that participating HR managers support the implementation of the six retention practices in their organizations.

Furthermore, all participating managers acknowledge the potential occurrence of negative outcomes if a proactive stance is not taken to design organizational retention strategies to control turnover among IT professionals. However, when one examines the study's results more closely, one finds that the existence of the six retention practices is not enough to control retention. In fact, the results indicate that some practices are worthy of more attention than others. For example, although all IT professionals indicated that training is critical to their retention decisions, and that lack of training opportunities will cause them to leave an organization, it appears that the mere existence of training opportunities does not guarantee their retention. In fact, because training is so necessary for their performance, opportunities abound in all IT organizations. As a result, training programs can be considered "hygiene factors" that only affect turnover when they are not included in an organization's retention strategy. Although ascertaining that training programs conform to the needs and preferences of IT professionals by including them in the decision-making process does ensure that they will not be dissatisfied with the organization, it does not guarantee retention. As was previously mentioned, this is also the case for intrinsic incentives, and financial compensation.

On the other hand, this study has demonstrated that organizations can achieve competitive advantage by focusing on the practices that are beneficial to retention, that differentiate themselves from competitors', and that are not easily imitated (Pfeffer, 1994). It is proposed that IT organizations pay particular attention to orientation, career development, feedback, and quality of life benefits as retention practices. Emphasizing the latter practices will increase return on investment in the short term by increasing retention rates, and in the long term by ensuring the continuity of the internal labour supply. In addition to ensuring that

their retention practices are consistent with market standards, organizations must look inward to determine how to make the most effective use of those retention practices that can put them a step ahead of the competition. In other words, to achieve competitive advantage, organizations must move away from a “best practices” approach to retention and adopt a contingency approach so they can focus on their particular needs, and more effectively use their resources to achieve their objectives. It must be noted that the interaction between retention strategy design and the needs and preferences of IT professionals is not static. Just as effective strategy design should be a reflection of the needs and preferences of IT professionals, existing strategies also affect their needs and preferences. It is for this reason that retention strategies should continually be evaluated.

The Best Practice Retention Model based on the literature includes the implementation barriers of financial and time constraints, and other organizational priorities. It must be mentioned at this point that, although these implementation barriers were originally presumed to affect the implementation of the six best practices, in fact, no barriers were found to affect participating organizations’ abilities to implement strategies consisting of all six retention practices. Instead, some barriers were found to affect the organizations’ abilities to effectively use the retention practices. First, organizational size, structure, and culture, as well as conditions in the job market affect the implementation of both the practices associated with competitive advantage, and the necessary “hygiene” practices. Second, the ability of organizations to effectively implement each of the sets of practices is affected by the existence of certain barriers. Specifically, the effective use of the “hygiene factors” is affected by barriers pertaining to limited resources, pervading beliefs, and job characteristics. The

effective use of the practices that confer competitive advantage is affected solely by pervading beliefs.

Based on the results of this study, the following list of four recommendations is proposed to IT organizations for retention control:

1. Use all available opportunities to achieve competitive advantage by focusing on orientation, career development, quality of life benefits, and feedback as retention practices.
2. Ensure the availability and accessibility of HR managers.
3. Foster open communication in the work environment.
4. Offer IT professionals a participatory role in decision-making processes regarding each of the six retention practices.

It should be noted that large organizations, organizations with a complex hierarchy, and those with cultures in which reciprocity and open communication are not inherent should consider decentralizing the HR function to the department level to achieve competitive advantage.

Therefore, a contingency model is proposed (see Figure 1 on page 188), which takes into account the relevance of labour market conditions, demographic factors, and organizational size, structure, and culture to the design of retention strategies. The contingency approach evaluates retention practices according to whether or not they confer competitive advantage. In the case of IT organizations, it has been noted that practices that confer competitive advantage in terms of loyalty and retention outcomes are orientation, career development, feedback, and quality of life benefits. In the case of IT organizations, practices that do not confer competitive advantage are intrinsic motivational strategies, training, and

financial compensation. The latter factors are, in this case, reclassified as “hygiene” factors, which means that when these measures are implemented, IT professionals are not dissatisfied with the organization. Finally, the proposed contingency approach also takes into account the effects of barriers caused by limited resources, pervading beliefs, and job characteristics on the use of “hygiene factors.” Also, the contingency approach takes into account the barriers caused by pervading beliefs on the effective use of retention practices that confer competitive advantage.

Study Limitations

As is the case with all research endeavours, minimizing study limitations through the design of a tight methodological process and a rigorous analysis was a concern throughout. Although all possible measures were taken to ensure that interview questions and questionnaires correspond to the literature review, limitations due to researcher bias still exist.

Minimizing researcher bias typically involves ensuring that two or more researchers conduct interviews, and code and analyse data. In the case of this study, budget limitations restricted the inclusion of additional researchers. However, according to Yin (1994), researcher bias may be significantly reduced provided that concrete steps are taken to ensure that similar conclusions result upon duplication of the study by another researcher. This researcher has taken many steps to create a database that will enable other researchers to examine, analyze, and see whether similar conclusions emerge. First, overall theoretical research questions, as well as interview questions and questionnaires have been clearly tied to the literature review. Second, participant selection has been justified according to a rigorous

methodological framework. Third, exploring the perspectives of HR managers and IT professionals has permitted cross-verification of participant responses. For example, similar questions about organizational retention strategies and programs were presented to both HR managers and IT professionals. A comparison of those responses served to lessen the possibility of data discrepancies due to miscommunication or the provision of untrue information by participants. In addition, comparing participants' responses to questionnaires and interview questions also permitted cross-verification, which increased the potential for clarity of information. Furthermore, using multiple sources of information in the form of questionnaires and interviews to collect data served to increase the study's validity (Whitley, 1996). Fourth, by distributing and collecting questionnaires, by conducting interviews in the same manner, and by documenting and reducing results into both coded and matrix formats, another researcher is more than likely to arrive at the same conclusions for analysis.

Researcher bias is also best avoided by ensuring that interviews are transcribed verbatim. Verbatim transcriptions of interviews was not possible in this study because all individuals from participating organizations refused to be taped due to concerns about anonymity and confidentiality. Primarily, since the labour market for IT professionals is so competitive, participating HR managers were concerned that revealing the names of their organizations would result in strategy leaks to competitors. When told that their anonymity and confidentiality would be preserved even with the use of an audiotape during interviews, all participants expressed major concerns about the use of the device, and consequently were told that only notes would be used to record their interview responses. Realizing that the lack of access to verbatim transcripts could be a major cause of researcher bias, this researcher took

a number of precautions to increase the accuracy of reported interview responses. First, to increase the clarity of contextual variables and to preserve participants' reactions to interview questions, notes were taken during interviews and included references to participants' body language and verbal expressions (Miles & Huberman, 1994). Second, to ensure that lapses of memory would be minimized when creating full interview transcripts, immediately after the interview and before leaving the site, interview notes were completed in full. Then, after leaving the site, full transcripts of the interview notes were copied in word processor format. Third, to further increase the accuracy of interview transcripts, all participants were sent copies of the transcripts for their review. Interview transcripts were only coded and reduced into matrices once the verification of participants was obtained.

Another potential limitation of this study involves sample size and the number of practices explored. As it turns out, the exploration of all six practices, as well as the examination of both the perspectives of HR managers and IT professionals resulted in a wealth of data to analyse and report in such a short time. To build theoretical themes, some of the more detailed information pertaining to each of the practices was not reported. Although worthy of further exploration, including all the information would have resulted in overburdening readers with minutiae. In retrospect, although it would have resulted in a less broad understanding of the full retention model, perhaps a better method of exploring the topic would have been to preserve the perspectives of the HR managers and IT professionals, but to limit the practices to one, and to increase the number of organizations and participants studied.

The selection of participating IT professionals affected the validity of study findings. These participants were selected from lists provided by their supervisors, so it is possible that threats to external validity existed in the selection process. For instance, when IT participants are selected from within one or two departments in an organization, the question arises as to whether the responses of those participants can be generalized to the total population of IT professionals in the organization. However, this researcher's use of replication logic within a multiple case design minimized the latter limitations (Yin, 1994). Since IT professionals' responses across the four organizations were similar, replication can be said to have taken place in this study, thereby permitting analytic generalization.

It should also be noted that this study examined retention from the organizational perspective in the sense that the goal of the study was to build theory that organizations can use to enhance their retention rates among IT professionals. The study did not attempt to assess the viewpoint of IT professionals regarding whether they believe it is beneficial for them to remain with one organization in the long term. Although half of the participants in this study indicated that they felt they could achieve their long term career objectives within their organizations, it is unclear whether they believe that career development should include diverse jobs in a variety of organizations. This is a question requiring further exploration.

In sum, despite its limitations, the results of this study represent a meaningful, initial exploration of the application of the Best Practice Retention Model to the IT industry. Furthermore, because of the efforts made by the author to create an accurate and complete case study database, the results of the study may be easily replicated by another researcher. Therefore, the value of results and data analysis have not been compromised.

Directions for Future Research

The issue of employee turnover is not new to academia, however, present day socioeconomic issues are bringing employee retention issues to the forefront in industry. Due to the shortage of skilled labour and the high turnover rates prevalent in IT organizations, the issue of controlling retention rates has become critical for organizations competing in the IT industry. The model proposed in this study is an attempt to provide IT organizations with a means of controlling retention rates based on recommendations from scholarly and practitioner literature, as well as on the experiences of HR managers, and the perceptions of IT professionals themselves. As such, this is a first step in the exploration process, from which much research can evolve. While conducting this study, four potential topics for future research exploration emerged.

The first issue requiring further research involves process issues related to the six retention practices. This paper attempted to explore the Best Practice Retention Model as a whole to determine its potential applicability to the IT industry. The results of this study demonstrate the significance of a number of process issues related to the six practices. However, the exploration of each process issue was beyond the scope of this paper. For example, IT professionals expressed similar opinions regarding the use of particular career development instruments, as well as the media used to present orientation and training programs. Future research should attempt to determine the key process issues necessary for the successful implementation of each retention practice. By breaking the model up into more manageable components for research purposes, the findings of several studies could potentially be linked together and tested to achieve a tighter, more comprehensive overall framework.

Another issue warranting investigation involves exploring the applicability of the proposed contingency model to other high-turnover careers, such as those involving front-line service. For example, the application of the model to sales professionals, customer service specialists and nurses could be explored. Also, future researchers may want to consider whether the best practice approach applies to industries where the level of employee turnover is moderate or low. In other words, do organizations with lower turnover rates still invest in the implementation of all six practices, and should they? For instance, studying the generalizability of the model to the individuals in the civil service, the military, and labour unions would be interesting. Also, future studies may wish to explore the needs and preferences of those incumbents whose organizations offer them job tenure, such as university professors and physicians in teaching hospitals. Their perspectives regarding retention may be quite unique. Evidence that the best practice approach does not apply in organizations with lower turnover rates could further illustrate the necessity of moving toward a contingency approach to retention.

Concluding Remarks

The advent of the knowledge-based economy and the shortage of skilled labour have made retention a critical issue in today's organizations. According to Garger (1999), HR professionals everywhere can attest to the fact that sustained economic prosperity does indeed have a downside. Faced with the tightest labour market of the last few decades, many organizations are having difficulty maintaining minimal staffing requirements, and foresee

more difficulty ahead in terms of acquiring the necessary human assets for continued growth. In most cases, resolving labour supply issues will involve systematic efforts to improve the retention rates of knowledge professionals. Thus, to be able to successfully compete in today's dynamic economy, organizations must develop a more strategic approach to retention.

In addition to enriching the current body of literature, this study has attempted to provide IT organizations with a contingency model that can be used to control retention rates. The model is based on recommendations from scholarly literature and practitioner-based field work, as well as on the experiences of HR managers, and the perceptions of IT professionals themselves. Hopefully, this study will be the first in a series of efforts to merge empirical and applied findings with the goal of aiding organizations in their attempts to secure a stable labour pool and ensure continued competitiveness in an ever-changing market.

The results of this study demonstrate that managing retention is a complex issue for organizations faced with the task of designing strategies for a different work force demographic. The entry of Generation X individuals into the workforce has forced many organizations to restructure their human resource policies, and to alter retention strategies to include a diverse range of non-financial benefits. In an era marked by rapid technological advancement and by employees who are more loyal to their own career development than to the companies in which they work, organizations who have traditionally been more focused on streamlining and restructuring processes now must poise themselves to compete to retain critical human resource assets. Furthermore, skilled professionals, aware of their leverage in the market, are choosy about the companies to which they lend their expertise, and are quick to express their displeasure with organizational policy by "jumping ship for a better

offer”(Joinson, 1999, p. 87) and taking their knowledge with them.

Although designing and implementing a comprehensive retention strategy does involve a significant monetary investment on the part of organizations, the results of this study demonstrate that investment in retention control does not have to be exclusively financial. As a matter of fact, the practices that confer competitive advantage (orientation, career development, non-financial benefits, and feedback) for IT organizations are less expensive than the “hygiene factors” (salary and training), and their effective use is less susceptible to persistent barriers. In fact, the only thing standing in the way of creating the unique culture necessary for enhancing retention is pervading beliefs. The dawn of the new millennium has coincided with the advent of a new, more humanistic approach to human resource management where success is achieved by working with people instead of limiting the scope of their activities, and by creating a dynamic culture where individuals’ needs and preferences are recognized, not simply prejudged according to industry standards. Ironically, in an industry wrought with tight competition where organizations strive to enhance retention by matching competitors’ strategies, the only way to achieve success is to “stand out in the crowd.”

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