Extended Abstract

How can an organization develop and retain competent IT workforce: the role of IT leadership

This study aims to provide a systematic framework with which business organizations learn to develop competent IT professionals and retain them. Derived from both IT academics and practices, the proposed model is based on a comprehensive set of critical knowledge and skills currently required on the job and uses IT leadership as a key factor playing an important role. Specifically, the study focuses on examining how leadership behaviors on the part of IT managers/executives influence their IT personnel to develop and enhance their knowledge and skills sets. This will, in turn, increase IT personnel’s needs satisfaction, quality-of-work-life (QWL) to improve the chance of retaining those IT personnel (with high in their needs satisfaction). In so doing, the study expects to provide IT practitioners with practical insights in how to develop currently required IT skills and retain the qualified IT workforces for long-run to maintain the level of the performance of the IT unit.

Introduction

As organizations are facing increasing challenges in managing global operations as they become more interlinked through technology and networks. Accordingly, an organization’s Information Technology (IT) unit assumes more strategic responsibilities and executes activities that develop, operate, and manage IT, provides functional needs, and contributes to clients meeting their strategic goals (e.g., IT development and management)(Chan, Huff, Barclay, & Copeland, 1997). As a result, organizational expectation towards the IT unit has certainly changed IT professionals’ job definitions and related roles (Fondas & Stewart, 1994). This in turn leads to the changes in critical knowledge and skills set required. Current IT workers are expected to not only have in-depth knowledge in technology, but also possess softer, non-tech skills to get the job done and provide organizations with solutions to their business problems (e.g., problem-solving, ethics and tolerance, oral and written communication, collaboration and team, business analysis, and functional area knowledge). Overall, IT professionals are needed to have their core competencies in operations and IT management, supported by a well-rounded business foundation.

However, as baby-boomers retire and a lack of interest in IT careers, it is becoming a great challenge to attract (and/or develop) qualified and competent IT professionals with the ‘right’ skills set to meet organizations’ such IT needs (e.g., IT professionals who speak both business and IT languages and can make a good sense of IT in the business context ) and retain them for a long run (Luftman, 2007a). In fact, this has been one of the big concerns for many incumbent IT leaders including Chief Information Officers (CIO). This study aims to provide a systematic framework with which business organizations learn to develop competent IT professionals and retain them. Derived from both IT academics and practices, the proposed model is based on a comprehensive set of critical knowledge and skills currently required on the job and uses IT leadership as a key factor playing an important role. Specifically, the study focuses on examining how leadership behaviors on the part of IT managers/executives influence their IT personnel to develop and enhance their knowledge and skills sets. This will, in turn, increase IT personnel’s needs satisfaction, quality-of-work-life (QWL) to improve the chance of retaining those IT personnel (with high in their needs satisfaction).

IT Leadership
IT leadership is defined as a set of consistent behaviors displayed by an organization’s IT managers/executive to influence their personnel to attain the IT unit’s goal (Bass, 1985). IT leadership is conceptualized in terms of two behaviors: transactional and transformational leadership behaviors. Even though, both behaviors are considered to be important for effective leadership (Bass, 1985), the study focuses on transformational leadership as it is likely to be more effective in influencing IT personnel who tend to possess unique characteristics valuing intrinsic nature of the work (e.g., highly-educated, intellectually-driven, professional, artistic, and favorable of independent and autonomous work environment).

Transformational IT leaders motivate followers by transcending the followers’ self-concepts (self-efficacy, esteem, development, intrinsic value of work, etc.). It has four types of behaviors: idealized influence (IIF), inspirational motivation (IM), intellectual stimulation (IST), and individualized consideration (IC). IIF involves being a role model by displaying exceptional capabilities and strong conviction towards the vision. IM focuses on articulating a compelling vision, providing meaning and challenge to their work, and inspiring by expressing high expectations and confidence. IST involves in encouraging thinking outside of the box and approaching old situations with innovative and creative ideas. IC focuses on paying attention to IS personnel’s individual needs for achievement and development by acting as a mentor (Bass, 1985).

Elements of aforementioned transformational IT leadership behaviors are expected to impact IT personnel’s unique characteristics in ways that they are motivated to develop and/or improve their knowledge and skills (Wynkoop & Walz, 1998). For instance, IT personnel (e.g., programmers, systems analysts, network administrators, database administrators and designers, etc.) are generally a highly-educated, intellectually immersed, and trained work-force, who tend to possess a high degree of professionalism, value autonomy at work and artistry of their accomplishments (Brancheau & Hoffman, 1987). Thus IT professionals are likely to be more ambitious, self-confident, and creative workers. They also have tendency to pursue opportunities for personal growth, cultivate horizontal relationships with external referents, and give high credence to peer-review processes (Conger, 1999; Locke, 1968).

**IT Personnel’s Critical Knowledge and Skills**

To champion organizational strategy effectively, IT professionals should have accurate specification of clients’ IT needs and business priorities so that an organization’s IT resources will be implemented in line with their strategic directions and objections. That means that IT personnel should be multi-faceted and multi-talented professionals who understand both IT and business functions: this requires skills in diverse areas in addition to technical skills such as communication (verbal and written), teamwork (works well with others), interpersonal (relates well to others), problem-solving (with reasoning and analytical critical thinking), creativity, selling, leadership/management (especially in project management) to name the few. This is in line with what is required for the next generation of IT professionals: to possess skills set including technical knowhow and softer, non-tech skills to get the job done (Luftman, 2007a). These skills set generally includes the following (Luftman, 2007a, 2007b):

1. Problem-solving: IT is to reconcile business problems,
2. Communication (both oral and written): since, regardless of technical skills, IT professionals must be able to effectively present how IT can contribute and enhance different/idiosyncratic business operation/process,
3. Collaboration (including team and/or project management): IT professionals must be able to work with business partners, other IT professionals, and vendors,

4. Business analysis: IT professionals must understand their business and industry to successfully leverage technology to help their clients to compete,

5. Functional area/domain knowledge: in addition to technical skills, IT professionals must possess specialized skills in various business operations to effectively contribute to their organizations.

**Quality of Work-Life (QWL)**

QWL is found to be positively related to various organizational affective variables such as job satisfaction (Danna & Griffin, 1999) and organizational commitment (Mowday, Porter, & Steers, 1982). QWL is defined as employee satisfaction with a variety of needs through resources, activities, and outcomes stemming from participation in the workplace and measured as employees’ psychological results of evaluations of the products of organizational work: discrepancy between outcome (e.g., economic rewards, promotion opportunities, challenges, co-worker relations, etc.) and standard and the weight of each outcome (e.g., expectations, values, motives, wants, social comparisons, etc.) (Efraty & Sirgy, 1990). The differences between outcomes and standards are weighed differently by the personal value of each outcome. When desired work outcomes such as performance and satisfaction are achieved, individuals are likely to experience three psychological states of experienced meaningfulness, experienced responsibility, knowledge of results (Hackman & Oldham, 1976).

Substantive autonomy, clear role descriptions, team work, involvement in the solutions of work problems, and learning opportunities are known to positively affect QWL (Nandan & Nandan, 1995), while as excessive workloads, forced overtime, and ambiguous or conflicting role demands cause emotional distress among employees and lower QWL (Menaghan & Merves, 1984).

**IT Leadership developing/retaining IT Personnel through their QWL**

Transformational IT leadership behaviors are expected to enhance IT personnel’s knowledge and skills set. A transformational IT leader is likely to influence IT personnel by articulating the significance of their work for the organizational strategic goals and transcending their values and beliefs tying their vision with organizational vision (IIF). A transformational IT leader transcends IS personnel’s perception of users as valued customers on whom IT personnel’s livelihood depends. Such an IT leader can transform IT personnel’s view on their roles by showing strong conviction to his IT vision, articulating and reinforcing the overall IT role (e.g., “IT as a strategic weapon”) till the message was transpired to the entire IT unit. Such a leader encourage IT personnel to take customers’ insights and suggestions for improvements be a liaison to properly educate IT personnel on how to serve their in and outside clients (e.g., how to communicate with customers, how to ask and understand whether IT can offer product/service they wanted, which IT product/service offering they would like to see, etc.).

IT personnel come to realize the value in developing those traits such as communication, personal traits, organization and negotiation. This will transform the IT unit to be more service-oriented and IS personnel to focus more on people-skills (Veal III, 2000). Thus, IT personnel will become personable, approachable and responsive to users in ways to concern more with their business problems and IT needs.
A transformational IT leader is also likely to encourage IT personnel to approach the traditional ways with innovative methods in solving business problems and incorporating priorities and IT needs for users (IST), devote considerable time and effort to understand users’ learning curve and anxieties they encounter with IT (IM; IC). Such a leader can encourage IT personnel to use their creativity and critical thinking abilities gave autonomy to IT personnel in making key timely decisions in solving business problem (e.g., changing the line of product/services customized to customers’ needs). An IT leader can also encourage IT personnel to be innovative and creative, think outside the box in finding ways for IT to serve businesses better and champion their strategies. In so doing, the IT cultivates the environment in which IT personnel’s efforts are publicly recognized in front of their peers at the regular meetings, retreats, etc., which in turn encourages IT personnel to be more productive and innovative in what they do. This will direct IT personnel to develop mentors’ skills and traits such as better communicator, superior speaking and domain knowledge, great degree of empathy, tolerance and patience, and such, which will be critical in handling users as protégé (Heller, 2000).

IT professionals’ skills are expected to be positively related to their evaluation of needs satisfaction at work. As their competencies are developed or improved in line with what is expected and/or required, IT professionals’ self-efficacy and self-regulation of motivation to work will be increased (Bandura, 1986; Menaghan & Merves, 1984). This will lead IT professionals to feel more confident, be more active, and seek innovative, persuasive ways to work with others. Accordingly, the enhanced skills and confidence facilitate the achievement of desired outcomes in terms of need satisfaction such as IT professionals’ social, esteem and actualization needs (e.g., IS personnel feel good about themselves by getting recognition for their work and enhancing their professional skills, competencies, and potential).

Concluding Remarks

This study expects to provide IT practitioners with practical insights in how to develop currently required IT skills and retain the qualified IT workforces for long-run to maintain the level of the performance of the IT unit as a whole, and eventually enhance the overall organizational performance. Currently the study is work-in-progress and stands at the early stage of data collection using web-based survey.

References


