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The impacts of information security trainer's knowledge sharing on new employee compliance

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Abstract

A new employee requires some training time before s/he can be productive in the organization. The mentor (i.e., a co-worker), on the other hand, has an essential role in the new employee's learning process. However, not all mentors are willing to share their implicit knowledge regarding the organization's IT policies. Suppose the mentor can train the new employee, but he reserves some knowledge. In that case, this will affect the learning ability and, consequently, the new employee's satisfactory compliance to follow IT policies of the organization. This study aims to understand the impact of information security trainer's (the mentor's) knowledge sharing on the new employee and its effects on compliance efficiently to information system security policies. The paper employs a knowledge-sharing intention framework based on the theory of reasoned action (TRA). First, a descriptive approach is adopted for this research, in the beginning, to describe the existing mentor approach to help the employee to learn efficiently and the impact of the disposition of the mentor to share knowledge, including the motivations for using Enterprise Social Network (ESN) for sharing the knowledge. The findings of this study offer to human resources about the behavior of IT trainers.

Keywords: Knowledge sharing, mentoring, employee compliance, enterprise social networks

Introduction

According to the Resource-Based View theory, all the resources an organization enable the firm to sustain its competitive advantage. One of the essential resources could be human resources: the old or new employee or the organization. In this context, the new employee needs tools that are the training resources of the firm in this case. One of the training resources is the personnel who works in charge of offering information security policies' training. It calls in this study the information security trainer or the mentor. The information security trainer must be an experienced senior employee who will quickly guide the new employee to quickly absorb the organizational security compliance approach. In enough tacit knowledge to develop is a good understanding of the IT policies. To define tacit knowledge as subjective knowledge, is experimental knowledge, is the knowledge that the old employee or new employee has acquired by experience. This knowledge is an essential factor in the development of the learning process of the new employee. The mentor could reserve knowledge by himself, and this affects the learning process. Nevertheless, explicit knowledge is knowledge of books, documents that are part of the new employee's training process.

Knowledge is not only data or information. Knowledge is organized with relevant information. For example, a route on a map can give the direction to follow; this is considered data. However, when the

direction follows is updated with the traffic information, this is considered knowledge. In this context, employees with knowledge imply that it can have the ability to solve a problem. For example, two employees in the same context, and the same information may have different solutions to the same problem since they have different abilities (Alavi & Leidner, 2001).

Talking about the knowledge of the firm, knowledge is the foundation that resides in individuals to carry out their tasks (Bock et al., 2005). But this knowledge has to be shared because when a new employee arrives at the firm, he needs to learn the firm's policies. When this knowledge is not shared, it is difficult for the new employee to learn entirely, in this case, the firm's information securities policies. In this context, social media has become a useful tool to share the knowledge that allows firms to take advantage of it. Social media refers to a platform of blogs, notifications, groups, forums, and homepages to help the mentor shares their activities, experiences, and ideas, give feedback and updates, and receive updates from the firm. Enterprise Social Network (ESN) is one of the systems powered by social media (Aboelmaged, 2018).

The knowledge sharing whiting organizations sometimes is limited because threats associated with espionage are dangerous to the firm. But talking related to the mentor is different because the new employee needs training to better comply with that firm's policies. The mentor has the task of training the new employee efficiently. In other words, the mentor must share explicit knowledge and essential tacit knowledge. This sharing of both pieces of knowledge better or has a good disposition makes the new employee better comply with the firm's policies. That is the main problem involved in this study; if the mentor doesn't share his knowledge efficiently, the new employee will have difficulties complying with the firm's information security policies.

This study aims to demonstrate that the mentor's sharing of knowledge influences the new employee, which controls compliance with the firm's security policies. How does the mentor's disposition in terms of willingness to share knowledge impact the new employee's compliance regarding an organizational policy? This work will propose to answer the question.

Literature Review

The employee must prepare to comply with information security policies because it is a key concern for organizations (Puhakainen & Siponen, 2010). As a result, firms need good training programs to help the employee learning process in a firm, in this case, to learn the information security policies of a firm. In this context of training in this study, three important factors are the main parts of this study. There are the employee's learning process and development, the mentor's knowledge sharing, and the new employee compliance.

The Employee Learning Process and Development

Employees' sense of continuous learning is becoming widely recognized for organizational effectiveness (Maurer, 2002). This learning process of the employee is supported by knowledge. The first learning is an increase in knowledge or skill, and development is a long-term change; it's taken the time that occurs through many learning experiences (Maurer, 2002).

Talking about knowledge is very related to knowledge management, which is to identify the collective knowledge in an organization (Alavi & Leidner, 2001). In turn, knowledge sharing refers to individuals' willingness to share knowledge (Bock et.al, 2005). This knowledge is an important factor in the development of the learning process of the new employee. The mentor could reserve knowledge by himself, which could affect the learning process of the new employee.

Taking the learning process of the employee into account and knowledge management, the knowledge is shared between the mentor and the new employee. This is where in this study is called the willingness of the mentor to share the knowledge they have acquired, and it explains in the next subsection.

Mentor Knowledge Sharing

Knowledge sharing defines social interaction, knowledge exchange, experiences, and skills available for the new employee (Lin, 2007). Knowledge sharing includes employee willingness to communicate knowledge freely and friendly to the new employee. Knowledge sharing helps the new employee to do something better, fast, and accurate.

Organizational knowledge accumulates within individuals (Bock et al., 2005). In the organization's work environment, the knowledge is not available until the knowledge owner makes it available (Alavi & Leidner, 2001). But this shared knowledge in a practical sense cannot be forced, but the organization can only encourage and facilitate the way. But what is the motivational force to induce the mentor to share or not the knowledge? (Bock, et.al, 2005) identify the personal belief and the institutional structures as the main motivational forces of knowledge sharing. Talking about institutional structure, there are individual benefits, for example, personal gain; group benefits, such as reciprocal behaviors; and organizational benefit, such as organizational commitment, etc. Institutional structure refers to the firm culture or climate. Climate refers to the firm members' thoughts, feelings, and behaviors (Alavi & Leidner, 2001).

The mentor knowledge sharing outcomes are the Tacit and Explicit Knowledge, as mentioned in the model. This tacit knowledge is the key for the new employee to learn efficiently (Alavi & Leidner, 2001). In other words, if the mentor has the good disposition to share knowledge, then this has a good effect on the learning curve and consequently on the new employee compliance.

New Employee Compliance

Compliance is either a state of being by established guidelines or specifications or the process of becoming so. For example, the software may be developed in compliance with specifications created by a standards body and then deployed by user organizations in compliance with a vendor's licensing agreement. The definition of compliance can also encompass efforts to ensure that organizations are enduring by both industry regulations and government legislation. Thus, in this study, compliance is applied to the new employee capability to be in accordance with established guidelines of the organization's security policies.

One of the main objectives in information security management is how the organization, individual, and technical factors affect the firm's information security. As mentioned earlier, this outcome is an important factor affecting employee compliance (Hu, Dinev, & Cooke, 2012). But training is offered by the human resources or IT personnel to teach the new employee the firm's information security policies.

Theoretical Framework of Knowledge Sharing

The theory of reasoned action (TRA) by Martin Fishbein and Icek Ajzan is adapted by Bock (Bock, et-al, 2005) as an initial theoretical frame to view the forces that influences the individual's willingness to share knowledge. The theory of reasoned action (TRA) tries to predict the intentions of the behavior. The theory states that an individual's decision to perform a behavior determines by the intention to do the behavior. This intention is, in turn, determined by the attitude toward and the subjective norms. This study emphasizes using the model (Bock et al., 2005) in the salient intention to share knowledge: tacit knowledge (implicit) and explicit knowledge. The variables of this study explains in the next section.

Operationalization of Variables

Anticipated Extrinsic Rewards Through ESN

Anticipated extrinsic rewards are the amount of extrinsic or external incentives or motivations that the mentor believes will receive for knowledge sharing. Organizational rewards are useful to motivate employees to do desired behaviors. Incentives could be promotional points, monetary incentives that motivate the mentor to improve the willingness to share knowledge. An example of incentives Buckman Laboratories recognizes its 100 top knowledge contributors through an annual conference at a resort. Moreover, Lotus Development, a division of IBM, bases 25% of its customer support workers' total performance evaluation on the extent of their knowledge sharing activities (Lin, 2007).

Related to these rewards, Aboelmaged (2018) mentions utilitarian motivations, that are derived from an economic concept to reflect the system's extrinsic, instrumental, and task-oriented motivations such as rewards and benefits. These benefits impact the mentor to share the knowledge. He also examines the direct impact of knowledge sharing through ESN systems on employee's productivity. Hence, a good ESN system from a utilitarian perspective should reasonably appraise and reward user's engagement and performance.

Anticipated Reciprocal Relationships

Anticipated reciprocal relationships are the amount to which the mentor believes can achieve the new employee's relationship through knowledge sharing. Reciprocity is one of the most important behaviors that contribute to knowledge sharing. This is valuable to the mentor because it captures employee desire to maintain a relationship with others. (Bock et al., 2005).

Sense of Self-Worth

Sense of self-worth refers to the degree of the mentor's esteem, or positive thinking about himself, to which is a self-referencing and self-empowering statement of what the mentor would optimally like to believe about himself in relationship to the contribution to the organization through knowledge sharing.

Attitude of the Trainer (Mentor)

The attitude of the trainer refers to the degree of pleasant feelings toward knowledge sharing. Attitudes toward knowledge sharing refer to employees' positive or negative evaluations regarding knowledge sharing behavior (Lin, 2007).

Subjective Norm (Peer influence)

Subjective norm refers to the degree of perceived co-worker's pressure to execute or not a behavior.

Intention (Willingness) to share knowledge

Intention to share knowledge refers to the degree of the mentor's willingness to communicate actively with the new employee. This communication refers to implicit or explicit knowledge, for example, skills, abilities, internal experiences, and knowledge learned through time.

New employee compliance (Effectiveness)

The new employee compliance's effectiveness refers to the condition of the new employee comply or not comply with the policies he has learned from the mentor.

Proposed Research Model

The proposed model depicts in Figure 1. With the behavioral intention model, intention to become involved in behavior is determined by the attitude in relation to that behavior (Brock et al., 2005). Then attitude toward knowledge sharing is the degree of freedom and conscious feelings to share the knowledge. This is the statement results in the first hypothesis.

There are factors that the individual perceives to be motivated to share knowledge. These factors are incentives from the organizations, like bonuses or redemption points. This is because some organizations have programs to reinforce knowledge sharing between employees. These factors are extrinsic rewards, and ESN platforms might provide these benefits (i.e., confirming decisions, acknowledging a contribution, rewarding a co-worker, etc.) (Aboelmaged, 2018). This results in the second hypothesis.

H₁: The greater the extrinsic rewards through ESN, the more favorable mentor attitude toward knowledge sharing.

When the society and organization influence two individuals, there is a social exchange, which is a determinant of their attitudes (Organ & Konovsky, 1989). This social exchange bonds the individuals. As a result, employees improve their relationships through knowledge sharing. This leads to the third hypothesis.

H₂: The more anticipated reciprocal relationships are, the better favorable mentor attitude toward knowledge sharing will be.

Knowledge interaction within individuals requires a good communication interaction with feedback. When the individual responds in the way that the other has anticipated, that individual or employee concludes that his thinking line is correct (Brock et al., 2005). This process provides to the employee a sense of worth. Then, employees with good feedback of knowledge sharing experiences develop a better understanding that increases their sense of self-worth.

H₃: The greater the sense of worth by knowledge behavior, the more favorable mentor attitude in relation to knowledge sharing.

The subjective norm is a perception of the social pressure to perform or not to perform a behavior (Brock et al., 2005). This norm comes from outside the employee and has an important role in behavioral intention. This leads to the fifth hypothesis. Also, the subjective norm is how the mentor sees the social pressure to perform a behavior (Park, 2000).

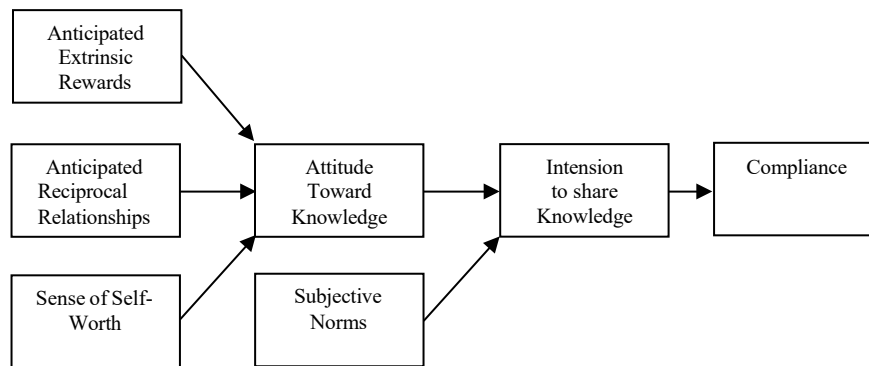
H₄: The greater is the subjective norm toward knowledge sharing, the greater is the mentor attitude toward knowledge sharing.

H₅: The more is the attitude toward knowledge sharing of the mentor, the greater is the intention to share the knowledge.

H₆: The more the subjective norm to share knowledge is, the more the mentor's intention to share will be. Subjective norms have an important influence on attitudes. The more the employee is motivated to follow group norms (Brock et al., 2005). As a result, subjective norms applied to knowledge sharing will impact the organizational employees (group) attitudes in relation to knowledge sharing. This results in the sixth hypothesis.

Knowledge is an important factor in the development of a new employee. Thus, the employee must learn in order to comply with the security policies of a firm. If the employee does not comply, the security solutions lose their advantage. Training is the most recommended method to get better employee compliance (Puhakainen & Siponen, 2010). Then, the mentor must share his knowledge in the learning and development of the new employee.

H₇: The greater the mentor's intention to share knowledge is, the greater is the effectiveness of the new employee to comply.



Methodology

The methodology consisted of the best practices revision for extrinsic rewards tendencies and sense of self-worth based on forty (10) articles from specialized technology peer reviewed journals and secondary data from 1989-2018. The variables were based on a description of the literature and theory used in this study. The variables for the anticipated extrinsic rewards, anticipated reciprocal relationship, and sense of self-worth were developed on relevant theories (Brock et al, 2005). The variables of attitude and subjective norm were developed from Fishbein and Ajzen's research (Brock et al., 2005). Then, the dependent variables' items to share knowledge and knowledge sharing were adapted from the TRS theory. The other dependent variable of comply were based on the literature.

Implications for Theory and Practice

This study is also worth examining the Process Theories of Motivation, from the perspective of the mentor disposition to share the knowledge that could apply one of the branches of contemporary motivation theories. This theory addresses why a given factor, such as the disposition, becomes the driving force behind an action and why it evokes a feeling of satisfaction. It is also interesting how mentors attempt to satisfy different competing needs and what triggers their actions.

In practice, this new approach of this study related to the mentor with the new employee compliance is important in the context that this new approach helps to identify those factors that could affect the new

employee performance during the entry phase in an organization. The knowledge-sharing relationship with the mentor is important to know because he is close to the new employee and is in charge of training the new employee, but this co-worker could affect the training process by his disposition to share knowledge. This knowledge is necessary for the learning process because it speeds up training and performance. This study helps to identify the disposition to share knowledge from the perspective of the mentor in a practical way. It could be applied to the human resources department to understand the behavior of the trainers and the new employee in the organization.

Future research on this topic could be to apply knowledge sharing to the technical employee, such as specialized junior engineers and technicians, where training to the new employee is very important because it is specific technical knowledge and includes tacit knowledge experiences. This future study could examine how knowledge sharing impacts the performance of the new employee. This performance of the new employee could be individual performance or collective performance and is more than just the execution of specific tasks; and it involves a wide variety of organizational activities that have important implications for the understanding and measurement of job performance. The concept is dynamic because it is not constant over time. Individual differences in personality and cognitive abilities, in addition to learning experiences, lead to variability in knowledge, skills, work habits, and traits, which mediate the effects of personality and cognitive ability on job performance.

Conclusions

This study proposes an innovative approach where the mentor's knowledge sharing impacts the new employee compliance. Every new employee's objective is to learn all the tasks related to the new job and have good relations with the co-workers or the mentor, who is the employee in charge of teaching the information security policies of the firm. This will help the new employee to reach a good performance goal, complying with the policies. Is the mentor could help the new employee to meet the goals and performance. The willingness to share the mentor influences the new employee's learning process, which impacts compliance. The mentor is close to the new employee and oversees the training process, but the disposition to share the knowledge could affect this learning curve or development.

This study focuses on the mentor's role in sharing knowledge with the new employee, enhancing the job's performance. Also, the mentor plays a vital role in building knowledge of the new employee to perform their job effectively. This paper identifies the effects of the mentor disposition to share the knowledge necessary in the employee's learning process. We conclude in this study that the mentor disposition could positively or negatively impact the training process and, consequently, the compliance of the new employee.

References

- Aboelmaged, M. G. (2018). Knowledge sharing through enterprise social network (ESN) systems: motivational drivers and their impact on employees' productivity. *Journal of Knowledge Management*, 362-383.
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issue. *MIS Quarterly*, 107-136.
- Bock, G. W., Zmud, R. W., Kim, Y. G., & Lee, J. N. (2005). Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Forces, and Organizational Climate. *MIS Quarterly*, 87-111.
- Goh, S. C. (2002). Managing effective knowledge transfer: An integrative framework and some practice implications. *Journal of Knowledge Management*, 23-30.
- Gomez, L. R., Balkin, B. D., & Milkovich, G. T. (1990). Rethinking Rewards for technical Employees. *Organizational Dynamics*, 62-75.
- Hu, Q., Dinev, T., & Cooke, D. (2012). Managing Employee Compliance with Information Security Policies: The Critical Role of Top Management and Organization. *Decision Sciences Journal*, 615-650.
- Lin, H.-F. (2007). Effects of Extrinsic and Intrinsic Motivation on Employee Knowledge Sharing Intentions. *Journal of Information Science*, 1-16.
- Maurer, T. (2002). Employee Learning and Development Orientation: Toward an Integrative Model of Involvement in Continuous Learning. *Human Resources Development Review*, Georgia Institute of Technology, 9-44.
- Organ, W. D., & Konovsky, M. (1989). Cognitive versus Affective Determinants of Organizational Citizenship Behavior. *Journal of Applied Psychology*, 157-164.
- Park, H. S. (2000). Relationships Among Attitudes and Subjective Norms: Testing the Theory of Reasoned Action Across Cultures. *Communications Studies*, 162-175.
- Puhakainen, P., & Siponen, M. (2010). Improving Employees Compliance Through Information System Security Training: An Action Research Study. *MIS Quarterly*, 757-778.
- Sun, Y., Lim, K. H., Peng, Z., & Wang, W. M. (2014). Norm of Reciprocity, Reciprocal Benefits, and Reciprocal Relationships: A Revisit of the Role of Reciprocity in Knowledge Sharing. *Thirty-Fifth International Conference on Information Systems*, 1-18.