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THE APPLICATIONS OF COMMUNICATION COMPETENCE FRAMEWORK FOR CIOS

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Abstract

Researchers in CIO arena have stressed the importance of developing and nurturing the CIO's relationships with both external and internal parties as the development and use of IT now demands collaborations from others. This paper proposes that, to improve CIOs' relationships with others and the effectiveness of CIOs' communication, CIOs must possess communication competence. Based on communication competence literature, competent communicators must achieve both appropriateness and effectiveness in their interactions. This paper argues that there are three required elements of communication competence, i.e. knowing what, how, and why one communicates. Because very little CIO research has conceptualized CIOs and their communication behaviors, this proposed framework can serve as a ground for future research on improving CIOs' effective communication. Based on these elements of communication competence, implications for CIOs are provided.

Keywords: Communication competence, planning cognition, modeling cognition, presence cognition, reflection cognition, consequence cognition, and states and traits

Introduction

MIS researchers have advanced knowledge pertaining to IT management, including in-depth studies on concepts, tools, and technology that enhance efficiency in an organization. Surprisingly, few studies have been done to investigate the communicative behaviors of top leaders of all information technology operations, namely the CIOs, who have the authority to make decisions on the appropriation of information technology resources to improve efficiency and achieve effectiveness in an organization. Most past CIO literature was conducted to examine the CIO's roles and the nature of the CIO's job. Very few past studies have been done on the intersection between CIOs and managerial perspectives. It is, then, the intent of this paper to integrate CIOs literature with the managerial communication perspective.

Communication competence is a prerequisite for effective leadership (Flauto, 1999). Barge (1994) asserted that communication is the principle means in which leadership is enacted. Like other leaders, CIOs must be adept at communicating with their subordinates. However, the CIOs' job is also unique in that CIOs must communicate with people from various organizational units in which information technology has partaken. CIOs must collaborate with the CEOs (Feeny, Edwards, and Simpson, 1992) and other executives so as to provide them with the IT perspective on how to align IT with organizational strategies and structures (Stephens, Ledbetter, Mitra, and Ford, 1992; Earl and Feeny, 1994; McNurlin and Sprague, 1998; Wilcocks and Sykes, 2000). Thus, CIOs must be capable of maintaining good vertical and horizontal relationships. In order to maintain those relationships, communication skills in a CIO must be heeded. Earl and Feeny (1994) pointed out that one of the CIO's required qualities is communication ability, as they stated:

> "…These CIOs are able to absorb and use the language of production or marketing and show understanding of and sensitivity to their colleague's concerns. Allied to a profound knowledge of IT, this communications capability allows them to demystify any aspect of IT. It is the combination of motivation and competencies that allows that goal-hungry CIO to operate effectively…"

This conceptual paper proposes that, to improve organizational effectiveness, CIOs must be able to competently communicate with other people both from within and outside their organizations. According to literature on communication competence, competent communicators must achieve both appropriateness and effectiveness in their interactions. Because very few CIO research has investigated both CIOs and their communication behaviors, a conceptual framework is needed as a foundation for future research on improving CIOs' effective communication. The purposes of this paper are, therefore, to use communication competence as a framework to recommend how CIOs improve their communication skills and to provide the reasons for them to employ communication strategies effectively. The conceptual framework presented is hoped to bring to light more empirical research questions about CIOs. The first section is the review of past literature on CIO and communication competence. In the second section, an adapted model of communication competence is discussed. The third section provides implications for CIOs based on the model of communication competence in the second section. The final section recommends areas for future research in CIO.

Literature Review

CIO

Research on CIOs is still in its early stage. It has, so far, been done to clarify the "what" question. That is, the common theme among CIO studies was to understand the nature of CIOs' jobs and their roles. Synott and Gruber (1981) who coined the term "CIO," defined CIO as "a senior executive responsible for establishing corporate information policy, standards, and management control over all corporate information resources." Brumm (1988) surveyed 111 CIOs to examine the nature of their works. He found that a.) most frequently reported title was not CIO but vice president; b.) the CIOs' main concern is to align information technology with business strategy; and c.) most CIOs were hired from within organizations. Stephens (1991) conducted a structured observation of five CIOs. He observed CIOs at work and spent one week with five of them. The results from Brumm's study were confirmed by Stephens' work. Stephens found that a.) the reported title was either vice president or senior vice president and b.) CIOs were hired from within for position.

Stephens, Ledbetter, Mitra, and Ford (1992) conducted another study on the nature of the CIO's job, using structured observation methodology. They studied five successful CIOs in five different industries. The results from this study showed that the CIO's role was primarily a strategic one. That is, CIOs worked as executives rather than functional managers; they participated in strategy planning and acted as "a bridge between the information technology group, the functional areas, and external entities."

Some researchers took a different approach by bringing forth prescriptive studies on CIOs. In other words, they attempted to find out what CIOS should do. Feeny, Edwards, and Simpson (1992) examined the relationship between CEOs and CIOs. They conducted in-depth interviews with CEOs and CIOs from 14 large UK organizations. They found that apart from the CIOs' functional responsibilities, CIOs must build a good relationship with CEOs (and vice versa) to achieve successful strategic planning. Good CEO/CIO relationship will contribute to success in the following respects: strategic information systems planning, business/IS partnerships, and CEO involvement in IT management.

Earl and Feeny (1994) studied information systems leaders in sixty organizations and concluded that "CIOs can and must add value to the organization, or IT will be seen as a problem instead of as a recognized strength." Their data provided qualities of the CIO who instilled value to other organizational members. Thus, one of the required qualities of CIOs is the CIO competency in instilling value to the organizations through communication. They noted that the CIOs in their studies "are able to absorb and use the language of production or marketing and show understanding of and sensitivity to their colleague's concerns."

What Is Still Missing in the CIO Research Arena?

The literature mentioned above attempted to answer the "what" questions. That is, what is the nature of the CIO's job?; what are their roles?; and what should they do? To advance the research on CIOs, many questions pertinent to the "how" and "why" must be investigated. In general, CIOs deal with both technology and IT people. However, the technology deployed to improve the efficiency and effectiveness in an organization has been extensively studied; for example, many studies have already been done on several kinds of information systems (e.g., DSS, EIS, GDSS, etc). More studies are needed to delineate how CIOs deal with other people in an organization and what causes their motivation to communicate competently. As Earl and Feeny (1994) asserted, one of the indispensable CIO's competencies is communication ability. Thus, one aspect of the "how" and "why" questions that

needs attention is how the CIO communicates effectively with other people to accomplish their tasks and why they have to employ those communication strategies.

History of Literature on Communication Competence

Literature on communication competence was first originated in the discipline of linguistics. Chomsky (1965), a famous linguist, defined competence as the speaker-hearers' knowledge of their language. According to him, the study of competence in linguistics focuses on the ability of a person in a particular community who knows the language and its syntax naturally without having to learn them formally. Thus, language competence for Chomsky is acquired through the socialization process. Later, Hymes (1972), a respected socio-linguist, reformed the notion of competence and created the term communicative competence. Hymes posited that communicative competence consisted of the knowledge of communication and the ability to actually communicate. He also added the element of social rules and norms into communicative competence. That is, competent communicators need to know the rules and norms in the society to which they belong in order to communicate effectively and appropriately.

In the communication discipline, the notion of communication competence has been researched from different perspectives. Jablin and Sias (2001) reviewed literature on this topic and found three approaches to conceptualize competence. First, communication competence can be studied from a goal-oriented approach. Researchers in this tradition consider communication as competent when communicators achieve the goal they have in each interaction episode. The second approach to study competence distinguishes cognitive aspect of competence from the actual performance. This approach is heavily influenced by Hymes as researchers conceptualize competence as consisting of both cognitive knowledge and the actual communicative behaviors. The last approach is called resource-oriented. In this tradition, communication competence is a set of skills that the communicators possess, in other words resource, they can choose to employ in each communication process.

Regardless of different approaches researchers adopt, there are three main elements of communication competence, i.e. cognitive knowledge, performance and competence. Cognitive knowledge is the knowledge of the subject and knowledge of how to communicate. Performance is the actual communication behaviors we act out in interactions. Motivation is the impetus for communicators to transfer the communication knowledge they have into behaviors they actually perform. These three elements are discussed in the literature on communication competence based on all approaches.

There have been debates among communication scholars in that which element should be the main focus in conceptualizing communication competence. McCroskey (1982) argued that competence should be studied, measured, and trained primarily in the cognitive domain. According to this researcher, communication competence cannot be equated with effectiveness, performance, or skills. Competent communicators are not necessarily able to achieve their goals in all interactions, nor must incompetent communicators always fail to achieve their goals in all interactions. At the same time, knowing how to communicate does not mean that the communicator will always do what they know and always employ the skills they have. On the other hand, Cooley and Roach (1984) advocated emphasis on behaviors in studying communication competence. They argued that behaviors were the only observable and measurable domain while the others must be inferred.

Even though the debates on communication competence remain unresolved, literature in this area can serve as a foundation for studying effective communication of CIOs. In the following section of this paper, an adapted framework of communication competence will be presented. This model is created to avoid the pitfalls of the debates mentioned above as it reframes cognition, performance, and motivation into knowing what, how, and why. This adapted model is also proposed with the intention for its applicability for researching CIOs' communication behaviors.

Communication Competence Framework

The Proposed Model of Communication Competence for CIOs

Communicative knowledge is defined as knowing what to say and do in communication contexts (Duran and Spitzberg, 1995). That is, one must know not only the subject matter of the topic of a conversation and contextual information but also plans for how to communicate appropriately and effectively. The former will be referred to "knowing what", while the latter be referred to "knowing how." However, even though knowing what and how is necessary, they are not sufficient to achieve communication competence as one may choose not to communicate, even though he/she possesses the communicative knowledge. Motivations to communicate are, thus, impetuses for one to initiate or continue interactions. Thus, communication competence can be viewed as possessing three elements: "knowing what," "knowing how," and "knowing why" (see figure1).

Elements of Communication Competence

"**Knowing What**": Knowledge of the subject matter and contextual
"**Knowing How**": How to communicate appropriately and effectively.
"**Knowing Why**": Motivations to communicate.

Figure 1. Elements of Communication Competence

"Knowing What"

Duran and Spitzberg (1995) developed an instrument to measure five types of cognition required for the communication competence. The first two types are discussed under the "what" element as they reflect the knowledge of the subject matter (planning cognition) and the contextual information (modeling cognition). The final three types are elaborated under the "how" element.

- *Planning cognition* "reflect the anticipation, mental rehearsal, and monitoring of topics of conversation." That is, one must plan on what he/she is going to say as well as what people might be talking about. Duran and Spitzberg also noted that in order to achieve communicative effectiveness, it is important for a communicator to practice what he/she is going to say before the conversation.

- *Modeling cognition* "reflect an awareness of contextual variables that provide information that serves to inform interaction choices." This type of cognition necessitates observing the situations in which a conversation takes place to obtain the contextual information. The observation includes watching who is talking to whom, studying people, being aware of people's interests and goals, and "sizing up" the event. To buttress the importance of modeling cognition, Lakey and Canary (2002) conducted a study to test the relationship between *sensitivity to the partner's goals* and the communication competence. They found that being sensitive to the partner's goal (i.e., concentrating on the partner's goal rather than one's own goal) helped improve communication competence. They explained that:

> "…possessing knowledge related to a partner's goals helps an actor to plan behaviors that will contribute to perceptions of effectiveness and appropriateness and to recognize the existence of incompatible goals."

Another point that a communicator should be aware of is the *level of goal complexity*. Dillard, Segrin, and Harden (1989) posited that there are two types of goals that one should be concerned: *primary* and *secondary* goals. Primary goals are defined as those defining and driving an interaction. They focus on "the instrumental objective of gaining compliance and encompass sources' concerns for effectiveness" (Schrader, 1999). Secondary goals are defined as those "shaping and constraining the behavioral options available to the source." They focus on interpersonal and identity objectives and reflect concerns for appropriateness (Schrader, 1999). It should be noted that people attempt to achieve multiple goals in their interactions, and that the more the number of relevant primary and secondary goals are, the more complex an interpersonal situation.

"Knowing How"

Duran and Spitzberg asserted that the following communication processes is required during and after a conversation. On the one hand, presence cognition guide how one communicates appropriately and effectively *during a conversation*. On the other hand, reflection and consequence cognition are concerned with improving one's communication competence *after a conversation*.

- *Presence cognition* "reflect an awareness of how the other is reacting to a conversation." To communicate appropriately and effectively, Duran and Spitzberg suggested that during a conversation, one must be aware if he/she has said something inappropriately. Simultaneously, one must pay attention to a.) the conversation per se (i.e., be aware of when a topic is going nowhere and when it is time to change the topic) and b.) conversation partners (i.e., "how others are reacting to what I am saying"). During this stage, the extent to which communication competence is achieved hinges upon the *communication adaptability* (Cupach and Spitzberg, 1983), which is defined as " the ability to perceive socio-interpersonal relationships and adapt one's behavior accordingly" (Duran, Zakahi, and Parrish, 1981). For example, once one reflects an awareness of the conversation partner's reaction to a conversation, he/she should be capable to adapt his/her conversational style, level of articulation, etc. to satisfy the conversation partner and therefore to make the conversation effective.

- *Reflection cognition* "tap a process of reflecting upon a performance with the objective to improve one's self-representation." That is, one must reflect upon him/herself (i.e., one should think about how well he/she communicated, what he/she said and could have said) as well as others (i.e., "what the other person thought of me"). The concept of communicative adaptability can also be applied here. After all the reflections in this stage, one must think about how to adapt him/herself to improve the next conversation.

- *Consequence cognition* "reflect a general awareness and concern for the effects of one's communication performance." This type of cognition reflects the general impact of one's communication. That is, how others interpret the conversation; what the consequences or effects of what I say are; and how what I say may affect others. It should be noted that the reflection cognition focus on past conversation behaviors and how to improve them, while the consequence cognition stress potential outcomes of interactions.

  It should be noted that these five cognition occur cyclically, starting from planning to modeling, presence, reflection, and finally to consequence cognition. After one goes through the reflection and consequence cognition, his/her communication competence will become more refined as a result of learning from reflection and consequences of the conversation. Even though this paper separates the knowing what and knowing how by splitting the five cognitive stages into two groups, the fact that all stages are intertwined is acknowledged. The separation between knowing what and knowing how is proposed because it will provide a clearer framework for future research and interventions.

"Knowing Why"

Motivations can be in two forms: extrinsic and intrinsic motivations. The extrinsic motivations are external drives that pull one to communicate. For example, they can be in a form of rewards, which stimulate one to share information. This type of motivation is not discussed here in detail as the focal point of this paper is communication competence. The paper will focus more on motivations that are impelled from within a communicator's mind. Thus, motivations are discussed in the scope of intrinsic drives to communicate.

Many relevant studies have been done on traits and states that influence the willingness to communicate. Several personality traits and states that are antecedents to the willingness to communicate are introversion/extraversion, self-esteem, communication apprehension, perceived communication competence (MacIntyre, Babin, and Clément, 1999), and self-efficacy (Duran and Spitzberg, 1995). Introversion/extraversion and self-esteem are viewed as personality traits, while communication apprehension, perceived communication competence, and self-efficacy are states—psychological factors that are in effect during a specific moment in time and within a specific situation (Cattell & Sheier, 1963). Each is discussed in more details in the following paragraphs.

- *Introversion/extraversion:* Introverted people are less likely to communicate than are extraverts because an introvert tends to be less socially active than an extravert (McCroskey & Richmond, 1990).

- *Self-esteem:* McCroskey and Richmond (1990) also found that an individual with low self-esteem, or the perception of self-worth, is likely to be less willing to communicate because he/she is more sensitive to environmental cues such as negative feedback. Moreover, a low-self-esteem individual tends to believe that he/she has nothing meaningful to contribute; thus, he/she tends to be less willing to communicate.

- *Communication apprehension:* MacIntyre et al. (1999) asserted that communication apprehension is probably the best predictor of willingness to communicate. Communication apprehension is defined as "an individual's level of fear or anxiety

associated with either real or anticipated communication with another person or persons" (McCroskey & Richmond, 1987). Experiencing communication apprehension may result in avoiding conversations with others; for example, one may feel afraid to talk to his/her boss lest the boss might discover the mistake he/she has made.

- *Perceived communication competence:* An individual who perceives him/herself to be communicatively competent is more willing to communicate (McCroskey and Richmond, 1990). For instance, a person who perceives communication competence on a certain topic (i.e., feeling that he/she will be a good communicator on the topic of discussion) is more willing to share his/her knowledge on the topic than is a person who does not.

- *Self efficacy:* Self-efficacy is defined as "the belief or confidence people have in their ability to achieve their goals" (Rubin, Martin, Bruning, and Powers, 1993). It should be noted that self-efficacy is not necessarily the same as perceived communication competence. Self-efficacy is a person's perception on his or her likelihood to achieve goals which may or may not be communication-related. For example, CIOs may have self-efficacy in technology contexts, but they may not perceive themselves as competent communicators. One of the explanations for why one chooses to initiate or avoid a conversation is self-efficacy. Saltzer (1982) asserted that "people tend to avoid activities for which they lack competence and also tend to avoid threatening situations." By the same token, those who have high self-efficacy in the topic of a conversation will be more willing to communicate than those who have low self-efficacy (Duran and Spitzberg, 1995).

Implications for CIOs

Why Do CIOs Need a Higher Degree of Communication Competence Than Other Senior Executives?

Although the communication competence is required for other types of leader, CIOs, however, need to possess higher degrees of the communication competence than other leaders do because of the following reasons. First, one important CIOs' job is to provide fundamental technological services to all organizational units; therefore, CIOs must be adept at educating other departments to use technology. In general, employees in lower levels know their senior executives or CEOs only from their images, not on a personal level, making their relationships pretty distant (Trevino, Brown, & Pincus, 2003). However, CIOs are senior executives who have to contact organizational members at all levels to provide them with information they need. This nature of CIOs work mandates higher level of communication competence in various contexts. Second, the nature of CIOs' job involves business transformations and changes (Feeny et al. 1992). Implementing technological changes requires collaborations across an organization. CIOs, as the leaders of information technology management in an organization, must be capable of building social networks in order to gain collaborations from others. Effective communication is a means for the CIOs to gain such collaborations. And finally, "CIOs must establish credibility of the IS department, thereby increasing the confidence of executive management in ideas presented by IS management" (McNurlin and Sprague, 1998). Thus, CIOs must communicate effectively in order to convince other executives of potential success caused by technological changes. Because CIOs need to be highly competent communicators, the following section guides how CIOs improve their communicate competency through the use of the proposed communication competence framework.

Applications of Communication Competence on CIOs

The concept of communication competence can help guide CIOs to improve their communication capability and skills in that the framework provides elements of communication competence and processes through which the competence can be accomplished (see Figure 2).Based on the communication competence framework explicated in the previous section, the implications for CIOs are discussed as follows:

"Knowing What"

Planning Cognition

Planning cognition involves plans on explaining the subject matter to others. A nature of CIOs' job is to participate in strategic planning with other executives (Stephens et al. 1992; McNurlin and Sprague, 1998; Wilcocks and Sykes, 2000). They are also responsible for educate other executives and people in other departments on potential uses of technology (Stephens et al. 1992). Therefore, proper planning cognition are required prior to any conversations with others who may lack knowledge of IT or need
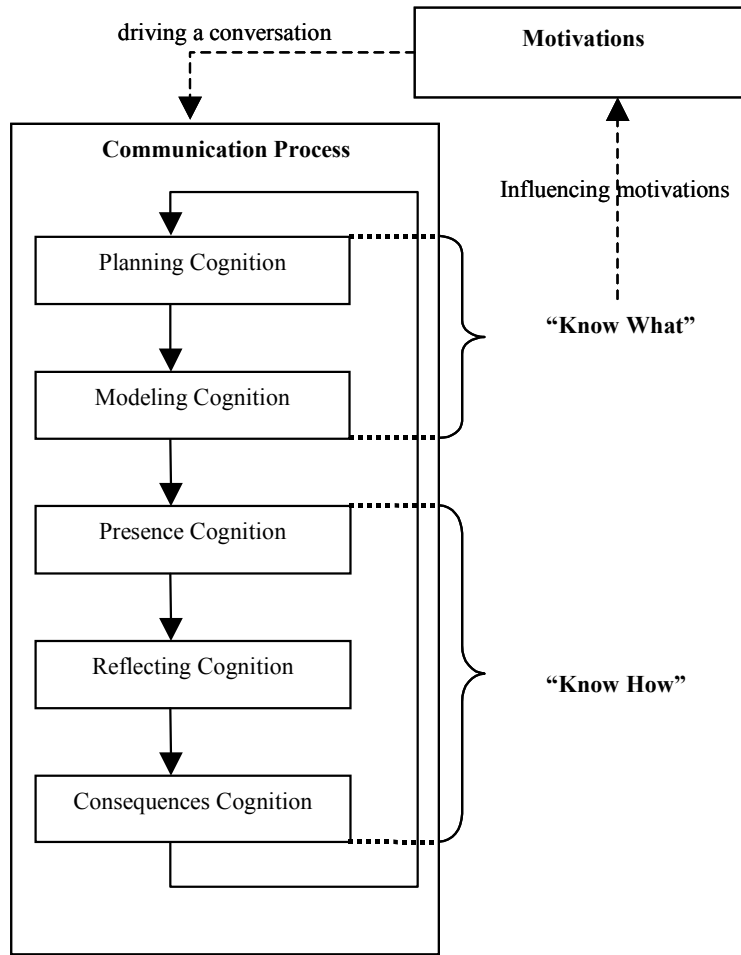
Figure 2. Communication Process

clarity of the added value of IT. The challenge becomes how to explain the technology in the terms that others, who are not familiar with the technology, can understand. CIOs must avoid using jargons with others. Moreover, they must plan the logics of their arguments and must be capable of making tacit knowledge of IT explicit. Clarity of the explanations on potential benefits and uses of IT can increase the knowledge of others, thereby increasing motivations to communicate back with the CIO.

Modeling Cognition

CIOs need collaborations from other departments outside technology units (Stephens et al. 1992). Modeling cognition involves understanding the contextual variables taking place in a conversation. The contextual variables that a CIO needs to know are the divergent goals of those from different business functions. Earl and Feeny (1994) argued that successful CIOs recognize the need to share their vision across the whole executive team; therefore they must be able to "provide detailed profiles of the understandings and attitudes of every key executive of the business." Consequently, CIOs must have clear communicative plans that are tailored to each individual. Because people from different departments differ in their interests and goals, sensitivity to their goals is the key to the success of this stage. Being dogmatic to what the IS department needs would only jeopardize the CIO's relationships with others. To get collaborations from other executives and other departments, CIOs must know what their needs are. This can help CIOs recognize any possible incompatible goals. Furthermore, CIOs must realize both primary and secondary goals of others; they should check for other political reasons that might obstruct or motivate others to accept the IT.

"Knowing How"

Presence Cognition

Presence cognition deal with reflections on the conversation partner(s) during the conversation. CIOs' jobs involve business transformation (Feeny et al. 1992). When they deal with the business transformation, they cannot avoid conflicts which are the results of resistance to change. Consequently, CIOs must be adept at reading situations (Stephens et al. 1992). During this stage of cognition, CIOs must be able to adapt their communication to fit situations, particularly the situations that involve changes. To be more specific, the CIOs must know how to handle emotional conflicts or distress from others, for example, when to change the subject of conversation and what tone of speech the CIO should use. The CIO must understand the situations others are going through when they are told to change the ways they do their work.

Reflection Cognition

Reflection cognition tap a process of reflecting upon a performance with the objective to improve one's self-representation. Because establishing credibility of the IS department is an important step to IT implementation success, the CIOs, as the leaders of the IS department, must learn how to improve their own self-representation. Impression management is, therefore, critical in this stage. Gaining acceptance from others may take some time, but it can be done through the process of learning from what others might think of the CIOs. The first step of such a process is to reflect upon the past conversations they had with others (i.e., think about how others were thinking about the CIOs and what the CIOs just said). The CIO should then learn from those conversations so that they can plan on how to improve the next conversations with them.

Consequence Cognition

Consequence cognition reflect the effects of one's communication performance. This stage of communication checks the effectiveness of the CIOs' communication; that is, have the CIOs done a good job in persuading, educating, and explicating others about the uses of the information systems implemented in an organization? The CIOs must ensure that there are no miscommunications between IS department and others.

"Knowing Why"

Figure 2 depicts motivations as drives to initiate the communication process. The motivations, however, is also influenced by the knowledge ("knowing what"). This is a result of having deep knowledge of the subject matter can boost confidence in a communicator. This, in turn, increases the level of the communicator's self-efficacy, reduces the chance of having communication apprehension, and results in the communicator perceiving him/herself as a competent communicator in the subject matter. As discussed earlier, self-efficacy, communication apprehension, and perceived communication competence play important roles in influencing the willingness to communicate.

The implications for CIOs in light of "knowing why" are twofold. First, the CIOs themselves must understand what causes their motivations and what inhibits their motivations. Although it is difficult to change others' personality traits, which can also influence their willingness to communicate, understanding traits of others can help CIOs to comprehend why some people tend to speak out more (or less) than others. However, CIOs can build environments in which proper psychological states anteceding the willingness to communicate are stimulated. To prevent communication apprehension, CIOs must encourage everyone to speak out without feeling afraid of being humiliated or reprimanded. Because self-efficacy and perceived communication competence are factors influencing the willingness to communicate, both factors need to be heightened. CIOs must respect other people's masteries and make others feel important and capable of achieving goals. Alternatively, the CIOs can even encourage their subordinates to develop their own expertise so that their levels of self-efficacy (confidence in their abilities to achieve goals) are increased.

Second, the CIOs must be aware of their own psychological blockages, which hamper their motivations to communicate with others. For example, the CIOs should understand that being introvert has pulled back their motivations to speak out. Building confidence in their skills and in abilities to achieve goals is also important to communicate competently. Lack certain knowledge that might curtail the CIOs' confidence could be a problem. Continually learning new ideas or technology can help enhance the CIOs' knowledge repertoire, which can, in turn, increase their confidence.

Recommendations for Future Research

Acknowledging that roles of a CIO and the nature of the CIO's job change continually due to the fast-paced change of technology, we believe that more research is needed to investigate the changing and emerging roles of the CIO. However, understanding the CIO's roles is, though necessary, not sufficient to advance the CIO research. According to the socio-technical perspective, merely paying attention to the management of either people or technology will not lead to organizational effectiveness. Rather, both must be heeded. Since most of the past MIS literature has focused on managing information technology, this could guide CIOs on how to manage the technology side. However, questions as to how CIOs should manage their relationships with a variety of people (e.g., other executives, IT professionals, clients, etc.) have barely been answered. Without communication, a relationship cannot happen, and without proper communication, a relationship cannot be sustained. Hence, future research in the CIO arena should delve more into a.) how CIOs improve their communication skills, b.) what they should do to communicate effectively, and c.) how and why they build good relationships with other people in order to get full cooperation from them.

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