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Guiding for Organizational Intelligence Research

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Abstract

The Organizational intelligence is “an organization's capability to process, interpret, encode, manipulate, and access information in a purposeful, goal-directed manner, so it can increase its adaptive potential in the environment in which it operates. The discussions about organizational intelligence has been carried out in very diverse meanings, although all of them refer to the term “ability” or “capability”. They remained very diverse meanings and understandings give an opportunity for researchers to investigate it more deeply and comprehensively in order to get better and more complete understanding. Organizational intelligence has been becoming a popular topic recently in business and academia and attracted many researchers and practitioners from different fields. However, many studies in such different disciplines and perspectives cause diverse interpretation of organizational intelligence. As a result, it presents a discrepancy resulting in disorder in the organizational intelligence literature. Since there is still no solid theoretical guidance (it is possible to result either new theory or enlivening theory), the complexity of the nature of organizational intelligence, the importance role of the participants, and the social process of organizational intelligence justify and lead the use of grounded theory as an appropriate method. Therefore, to investigate organizational intelligence it is argued that the adequacy of theoretical guidance cannot be expected to come from the extant theories, because there was still no solid theory discussing about organizational intelligence deeply and comprehensively.

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1. Introduction

Nowadays, the external environment of the organization is undoubtedly more dynamic and unpredictable, making it very difficult for companies to avoid turbulences hindering their activities. Unavoidably, contemporary organizations must face the rapidly changeable events in economical, technological, social, cultural, and political environment. Their survival definitely will depend on their ability to adapt to the changing environment. At the interface between the internal field and the external field forces, the companies should maintain a dynamic equilibrium. Organizations that successfully react to a dynamic and usually an inimical trade ambiance depend on their ability to provide relevant information and to find adequate solutions to the problems they face. As a result, they must be able to develop new *capabilities* and to build flexible structures, thus winning core competences (Prahalad and Hamel, 1990; Vasilache, 2007). The terms “ability” and “capability” are related to “intelligence”, in the sense that organizations should have appropriate intelligence to face changes and complexity in the environment. This intelligence is called “organizational intelligence” (Akgun, 2007; Bratianu, 2006; Cakir, 2008; De Angelis, 2013; Glynn, 1996; Saeed et.al., 2014; Simic, 2005; Vasilache, 2007), that is one of the new and powerful competitive capabilities (Vasilache, 2007). One of definitions of organizational intelligence (OI) is “an organization's capability to process, interpret, encode, manipulate, and access information in a purposeful, goal-directed manner, so it can increase its adaptive potential in the environment in which it operates (Glynn,

1996).”

The importance of organizational intelligence as a source of competitive advantages is more obvious in the first decade of the twenty-first century. For instance, it can be viewed in the following citation:

“Knowledge has value, but intelligence has power. This is a key lesson as we move from New Economy to Next Economy. The New Economy concerned itself with managing the enterprise, the firm’s knowledge assets, and competitive knowledge. The Next Economy demands that all this be merged into a capability fostering the creation of actionable intelligence. At minimum, better managing all aspects of an organization’s knowledge base can fortify strategic decision-making. At maximum, it can generate defensible competitive advantage through intelligence, a sustainable source of above-average return (Rothberg and Erickson, 2005).”

The study about organizational intelligence concerning the complex organization was initiated by Wilensky in his book in 1967 “Organizational Intelligence: Knowledge and Policy in Government and Industry” which mainly dealt with the mentality and its machinations that distort and omit data necessary for decisions. His examples was drawn from failures of military intelligence; the Central Intelligence Agency (CIA) and the Federal Bureau of Investigation (FBI); the administration of justice; industrial management; social welfare decisions; and even the “intelligence” required for sanity hearings. From the time Wilensky published his book until now, the discussion about organizational intelligence has been carried out in very diverse meanings, although all of them refer to the term “ability” or “capability”. These differences, for example can be viewed from what they emphasized in organizational intelligence: information processing to get appropriate decision making (Wilensky, 1967), competitive intelligence (Rothberg and Erickson, 2005), business intelligence (Silber and Kearny, 2009), artificial intelligence (Kim, 1995; Unland, 1994; White, 2008), and so forth. That the discussions of organizational intelligence remained very diverse meanings and understandings give an opportunity for researchers to investigate it more deeply and comprehensively in order to get better and more complete understanding. Furthermore, the importance of organizational intelligence also stimulates researchers to explore it. This can be evaluated by analyzing the relationship between organizational intelligence, learning, knowledge, and innovation summarized in table 1 below:

Table 1. The importance of OI

Authors	Explanation
(Cook and Yanow, 1993; Bonthous, 1996; Glynn, 1996) in Kalkan 2005	OI is required for organizational learning to occur and organizational innovation to be generated
(Nevis et al., 1995; Glynn, 1996; Halal, 1997; Schwaninger, 2001; Akgün et al., 2003) in Kalkan 2005	OI refers to the capacity of a corporation as a whole to gather information, to generate knowledge, and to act effectively based on the knowledge it has generated in order to adapt to the environment surrounding the organization
Kalkan 2005	OI is a key enabling force underlying many vital activities and processes dominating organizational life the processes of knowledge acquisition, new organizational knowledge creation and knowledge utilization all of which require OI
Simic, 2005	OI comprises combination of knowledge, experience, consciousness and understanding in organizational problem
Halal, 1997	OI is the capacity of an organization to create knowledge and use it to strategically adapt to its environment or marketplace
Bencsik, 2009	The tools of information technology supporting acquisition, storage and use of information and organizational learning as well as knowledge coming into being as a result of it, fixing and storage of knowledge in the memory of a company play an important role in the intelligence of organizations and competitiveness of a company
Maranon, 2000	Intelligence could be labeled natural or potential. Furthermore, we should include another type of intelligence, that which we identify by means of IQ tests, a combination of the potentiality and the knowledge acquired in the first years of life and early education
Senge, 1990; Walsh&Ungson, 1991; Weick, 1990 in Glynn, 1996	Implicitness in theories of organizational cognition, such as organizational learning, memory, and sense making, is intelligence, for without it an entity cannot learn, remember, or process information effectively.
Senge (1990) in Glynn, 1996	Intelligence is implicitly at the core of the learning organization; it is what enables a firm to learn from its own experience and the experience of other firms.

From table 1 above, it can be seen the importance of organizational intelligence in the life span of organizations. In early stage, organizational intelligence can be assumed as a natural or a potential feature that exists when the organization is founded. With the initial intelligence, organization can learn or generate innovation in order to adapt to the environment and to solve the problem. Without intelligence, organization cannot learn, remember, or process information effectively. By learning, organization can get and develop new knowledge. Moreover, by learning and using current knowledge and experience, organization can improve the intelligence. In other words, intelligence, learning, and knowledge cannot be separated each other in life span of organization because intelligence is their core. They form a continuous cycle to increase the organization’s performance. Organizational intelligence is one of the the important concept determining the existence of organizational learning process and knowledge in its early stage. Thus the relevance to investigate the organizational intelligence has been established, but do we know what it is? To understand it, therefore, we need to know how we are going to answer this question.

2. A Framework to Understanding Organizational Intelligence

At the initial step in exploring and investigating organizational intelligence, we use metaphor by relating organizational intelligence with human intelligence. Intelligence comes from the Latin verb *intelligere*, which means "to understand". There are many definitions of intelligence, e.g.: ability to adapt effectively to the environment, either by making a change in oneself or by changing the environment or finding a new one (Encyclopedia Britannica, 2006); the ability to acquire and apply knowledge and skills (Compact Oxford English Dictionary, 2006). From psychologist's view, intelligence can be defined as the followings: the ability to solve problems, or to create products, that are valued within one or more cultural settings (Gardner, 1993); the global capacity to profit from experience and to go beyond given information about the environment (American Psychological Association).

For such a long time, many researchers emphasize on the rational intelligence/RI (Spearman, 1904, Cattell 1943, etc.). This attitude is a legacy of the early 20th century when psychologists designed tests whose primary objective was to measure intellectual or rational intelligence (used to solve logical problems). In mid-1990s, Daniel Goleman revealed findings in neuroscience and psychology focusing on the importance of Emotional Intelligence/EI (Mayer et.al., 2000; Goleman, 1995). This intelligence triggers empathy, motivation, compassion and ability to respond skillfully to pleasure and pain. Goleman argued that EI was a basic requirement for the use of RI. By the end of 1990s and early 2000s, Zohar and Marshall (2000) introduced a new dimension to human intelligence, namely spiritual intelligence which they claim as the ultimate one (Zohar & Marshall, 2000). Spiritual intelligence is an ability to access higher meanings, values, abiding purposes, and unconscious aspects of the self and to embed these meanings, values, and purposes in living richer and more creative lives. The transformative power of SI distinguishes it from RI and EI. RI primarily solves logical problems whereas EI allows people to judge the situation and behave appropriately, while SI enables people to ask themselves how they will react in the first place when they are in a particular situation.

As individuals have three types of intelligence (RI, EI, SI), the next question to pose is whether or not organizations exhibit the same character as human being in terms of intelligence. Before answering this, it is wise to concern about the following statement: "organizations have multiple dimensions of competence" (Albrecht, 2003; Stalinski, 2004). Competence is related to the ability or the capability which both are related to the intelligence. Organizational intelligence should be regarded as a construction composed of different components. For example, perception, cognition, memory, learning, communication, reasoning, culture, information processing and behavior flexibility are proposed as organizational intelligence components in the literature (Kalkan, 2005). Although all of these authors agreed that organizational intelligence consists of many components, but each author conveyed these components in a very diverse meaning which undoubtedly confuse their readers. In order to avoid these confusions, a framework is significantly needed to integrally and comprehensively discuss organizational intelligence.

One of the frameworks that is worth applying to analyze organizational intelligence is the General System Theory (GST) framework introduced by Bertalanffy in 1930s. According to Bertalanffy, all scientific phenomena in both natural and social science formed a hierarchy: societies (organizations) contain groups, groups contain individuals, individuals comprise of organs, and so on. Each hierarchy has its own unique characteristic and is also incorporated all the characteristic of lower level. For instance, Gant and Agazarian(2004), by using GST as the basis of their study, developed System-Centered Theory (SCT). It defined a theory of human living systems that provide foundation for understanding the dynamic system which is isomorphic to individuals, groups or organizations, and *all* forms of living human systems. The two major basis in SCT are hierarchy and isomorphy. SCT defines hierarchy as every system in a specified hierarchy exists in the context of the system above it and is the context for the system below it; whereas isomorphy is defined as similarity in structure and function. In addition, Glynn (1996) and Akgun(2007) posited a framework to analyze organizational intelligence based on GST by stating that intelligence can be considered as multiple levels of analysis: individual, group, or organization. Glynn adopted the multilevel framework outlined by Glynn et.al. (1994) to examine intelligence at both the individual and the systemic levels and to observe the interrelationship of these levels. All in all, according to Akgun(2007), Gant & Agazarian (2004) and Glynn (1996), organizational intelligence can be analyzed based on individual intelligence.

There are some basic assumptions in adapting individual intelligence to organization (Glynn, 1996; Akgun, 2007; Cakir, 2008):

- First assumption is the functional similarity between individual and organizational intelligence. Like individual intelligence, organizational intelligence can be defined as the capacity of processing information towards the goal, interpreting it, decoding and transformation;
- Second assumption states that "organizational intelligence is adaptive", thus organization can improve its adaptive potential in the environment;
- Third assumption postulates that organizational intelligence offers an explanation for an experiential learning process emphasizing organizational success and failure

Although there are three basic assumptions, both individual and organizational intelligence have similarities; however they

are not proportionally equal:

- As a property of the collective, organizational intelligence is a result of social process (the result of interactions among individuals) (Glynn, 1996).
- Organizational intelligence does not represent the “intelligence” of managers, similar to managerial cognition, nor is it the sum of the individuals (Akgun, 2007; Simic, 2005).

Since organizational intelligence is not identical with, but related to the intelligence of its membership, mechanisms that relate individual and organizational intelligence are considered. Based on the examination of the link between micro level and macro level processes, Glynn (1996) identified the following three types of mechanisms that facilitate the channeling process from individual to organizational intelligence: aggregation (e.g. individual members’ intelligence accumulates to become organizational intelligence), cross-level transference (e.g. individuals’ intelligence is transformed and codified as organizational intelligence), and distribution (e.g. organizational intelligence is embedded in the structured patterns of thought and action in which organizational members interact and engage). Each of these mechanisms is built on a different set of theoretical assumptions and has implications for the way in which organizational intelligence is measured. However, Akgun (2007) did not agree with mechanism proposed by Glynn (1996). He was more inclined to the structuration theory suggested by Giddens (1984) to explain the mechanism of organizational intelligence. Organizational intelligence can be actualized by the reciprocal interactions between human agency (individuals) and the structure of social systems (organization).

Based on the explanation above, it can be concluded that understanding and assessing individual intelligence is important to understanding organizational intelligence. Therefore, investigation on intelligence at organizational level can be done based on the individual intelligence. Moreover, this matter is supported by mechanisms proposed by Glynn (1996) and Giddens’ structuration theory (Akgun, 2007). Nevertheless, we cannot adapt the individual intelligence to organization intelligence directly, because organization is a collective entity (a result from interactions among its members).

To sum up, organizational intelligence has been recently becoming a popular topic in business and academia and attracting many researchers from various fields of study. Because of many studies in such different disciplines and perspectives, the interpretation of organizational intelligence shows a discrepancy, resulting in disorder in the organizational intelligence literature (Akgun, 2007; Bratianu, 2006; Dayan, 2006, Degraes and Marquina, 2012; White and Djebarni, 2008). Although there are any extensive individual intelligence literature, and can be a foundation, they are still not enough to lead to organizational intelligence understanding. Nevertheless, the organizational intelligence literatures themselves also have been under investigation. Therefore, many studies in organizational intelligence remain unsolved matters that should be investigated in further studies and provide the scholars an opportunity to study more deeply and comprehensively, especially in the specific area.

In order to provide a guidance to investigate organizational intelligence, we proposed an integrated framework. This proposed framework is compiled in order to reduce the misunderstanding about organizational intelligence, because the prior researches remained any confusions and incompleteness. This confusion and incompleteness, mainly relate with the mapping between the dimensions of individual intelligence and the dimensions of organizational intelligence, and the mechanism how individual intelligence become organizational intelligence clear to map the each mechanism with each aspect of intelligence, whether each aspect refers to these mechanism or each aspect refers to different mechanism or even the mixture of them. There are the sequence steps to investigate organizational intelligence in integrated framework:

1. Choose the organization for the object of research, whether a service organization or a manufacturing organization, whether public organization or private organization.
2. Investigate the dimension of individual intelligence in chosen organization
3. Investigate the dimension of organizational intelligence in chosen organization
4. Investigate the mechanism how individual intelligence become organizational intelligence in chosen organization
5. Investigate the flow organizational intelligence among subsystems in chosen organization.

3. Methodology

Organizational intelligence has been becoming a popular topic recently in business and academia and attracted many researchers and practitioners from different fields. However, many studies in such different disciplines and perspectives cause diverse interpretation of organizational intelligence. As a result, it presents a discrepancy resulting in disorder in the organizational intelligence literature (Dayan, 2006). Therefore, to investigate organizational intelligence it is argued that the adequacy of theoretical guidance cannot be expected to come from the extant theories, because there was still no solid theory discussing about organizational intelligence deeply and comprehensively. Although there are many theories and frameworks from prior researches it can be argued that setting them aside could be considered. Therefore, we do not use the existing theory to guide us to perform this research. Related to the availability of a solid theory, the result of this research

has possibility to produce a theory that truly different. Beside being lack of solid theoretical guidance, the nature of organizational intelligence itself is very complex which then increases the complexity of research in organizational intelligence. The complexity of organizational intelligence lies on the following aspects:

1. The future and the past are uncertain: The future is uncertain because different people in an organization often anticipate dramatically different futures. The past is also uncertain, because it still remains to be realized but because it dimly, inaccurately, or differently recalled.
2. The problem of conflict: Organizations seek intelligence in the name of multiple, nested actors over multiple, nested time period. The preference or identities embraced by some participant are inconsistent preference or identities of other participant.
3. The problem of ambiguity in the evaluation underlying an action: The preferences to be pursued or the identities to be enacted are usually assumed to be clear, stable, and exogenous. In organizations, in fact, they are typically neither clear, nor stable, nor exogenous.

The absence of solid theoretical guidance and the complexity of organizational intelligence and the need to understand organizational intelligence make researchers explore this topic from the main source, namely the employee of organization (participant). The relevance of research is not only valued through the selection of topic but also depends on to which the perspective of organization employees are included in the process of research. Intelligence is one of those concepts that everyone has in mind, so the information regarding organizational intelligence that is based on individual intelligence is inseparable from the experiences, perceptions and perspectives of participants. In order to integrate the individual intelligence and the organizational intelligence, a social process is needed as a result of interaction among all of members of organizations.

Since there is still no solid theoretical guidance, the complexity of the nature of organizational intelligence, the importance role of the participants, and the social process of organizational intelligence justify and lead the use of grounded theory (GT) as an appropriate method (Glaser and Strauss, 1967; Glaser, 1978; Glaser, 1992; Glaser, 1998). Glaser does not provide systematically the reason why GT is appropriate as research methods for development of process theories in a specific domain. Fortunately, many authors provided the reasons of using GT (Locke, 2001; Martin and Turner, 1986; Parry, 1998), these are:

1. Capturing complexity
GT is well to capturing complexities of the context in which action unfolds, enabling researchers to better understand all that may be involved in a particular substantive issue (Locke, 2001). Similarly, Martin and Turner (1986) argue that GT is suited must incorporate the complexities of organizational context-rather than ignore or simplify them-to produce accurate or useful result. This reason is in line with the argument that researchers who use GT want to discover what the problem is and what processes account for its solution, rather than assuming what should be going on, as required in preconceived types of research (Glaser, 1978).
2. Linking well to practice
GT has proved especially useful to help organizational members gain a perspective on their own work situations (Locke, 2001). Turner (1983) has used GT to study organization for more than a decade because it has enables him to “produce theoretical accounts which are understandable to those in the area studied and which are useful in giving them a superior understanding of the nature of the own situation”. The argument mentioned by Locke and Turner is closely related to the idea that, due to its distinguishing explanatory power, GT offers practitioners a new understanding and control over their actions (Glaser, 2001), as it puts a high premium on the relevancy of their experience (Glaser, 1998).
3. Supporting theorizing of ‘new’ substantive area
According to Locke (2001), the use of GT is seen as supporting theorizing of ‘new’ substantive areas, because the naturalistically-oriented data collection methods in addition to the theory-building orientation permit the investigation and theoretical development of new substantive areas as they arrive on the organizational scene. It is in line with the direction provides by Glaser (1978), especially in chapter 10, “New Direction in Grounded Theory”.
4. The substantive area is a social process
Parry conveyed that GT is appropriate to study the social process. This argument inline with Glaser, that the focus of grounded theory is the identification of the basic social process, the nature of which is the subject of the derived theory (Glaser, 1978, chapter 6). Glaser (1992) has observed that grounded theory, in particular, is useful to “researchers and practitioners in fields that concern themselves with issues relating to human behavior in organizations, groups, and other social configurations.”

Based on four reasons above, we consider GT appropriate for investigating organizational intelligence framework.

4. Conclusion

This paper is a conceptual paper to give a guide for investigating organizational intelligence in integrated framework. Moreover until now there are no authors that discuss organizational intelligence in integrated framework, at least to see the connection or relationship between individual intelligence and organizational intelligence. Therefore, we propose an integrated framework to investigate organizational intelligence in sequence steps: choose an appropriate organization, investigate the dimensions of individual intelligence, investigate the dimensions of organizational intelligence, investigate the mechanisms that connect individual and organizational intelligence, and the flow of organizational intelligence among subsystems in organization. Since there is still no solid theoretical guidance, the complexity of the nature of organizational intelligence, the importance role of the participants, and the social process of organizational intelligence justify and lead the use of grounded theory as an appropriate method in investigating this framework.

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