Abstract

Any organization, big or small will always strive to rise to the level of its competence. Competence refers to an organization’s capacity to deploy resources, usually in combination, using organizational processes, to affect a desired end. The competence in turn provides the intelligence to an organization for it to grow and flourish. In this paper, we argue that in order to sustain organizational intelligence, it is important to clearly define the competence objectives and correspondingly build organizational capabilities. The paper presents fundamental and means competencies for a sustaining organizational intelligence.

Keywords

Organizational intelligence, competence objectives, organizational capabilities.

Introduction

An organization always benefits from having superior knowledge and information that it can use to advance its resources. Information is an invisible asset that, when used properly, can help an organization leverage other firm resources (Sampler, 1998). But even with information and knowledge, a firm or organization cannot advance if it does not have the organizational intelligence to use this information and also the competence and capability to apply the information within that organization. However, nurturing and sustaining organizational intelligence has been an ongoing problem for organizations. In the literature, this problem has been identified in relation to the lack of a clear definition of objectives, the failure to nurture an organization (e.g. see Tippins and Sohi, 2003), and the general uncertainty of the business environment.

According to Liebowitz (1999), Organizational Intelligence (OI) is the collective assemblage of all intelligences that contribute towards building a shared vision, a renewal process, and a direction of the organizational entity. In this respect, there are two key questions that we need to address. First, how do we make an organization more intelligent? Second, what should our objectives be, and what values should we take into account? In this paper, we argue that organizational intelligence in the context of IT services can be developed by clearly defining the strategic objectives and the necessary competencies of an
organization. These competencies and capabilities will further enhance the organization. We illustrate how the development of competence objectives, for providing *par excellence* IT services, forms the basis for organizational capability. Firms that achieve higher levels of IT competence are thought to be in a superior position for managing the “invisible assets” that create market leadership (Itami, 1987).

**Literature**

An abundance of literature is available on organizational competency. A lot of this literature has been on developing capabilities for competitive advantage (Thomas and Pollock, 1999). There has also been a focus on appropriately managing the resources for getting value from organizational investments (Drucker, 1994). Within any organization, a lot of effort is being made to increase and use the organizational competencies available to it. In the public sector, where organizations have no motivation for competitive advantage, the focus on managing resources to derive value from IT services becomes very useful. The goals of providing IT services in the public and private sector differ greatly, and as a result, information management requirements are more difficult and unstable (Bretschneider, 1990; Caudle, Gorr and Newcomer, 1991). However, there is still a lot of interest in deriving value from IT services in the public sector. While Brancheau and Wetherbe (1987) introduced the idea of using IS for competitive advantage in the private sector, Caudle, et al. (1991) introduced its public sector counterpart, finding ways to increase application and technology expertise sharing with other public sector agencies that have similar functions or provide similar services.

According to Sanchez & Heene (1996) the concept of competence tries to incorporate and integrate essential dynamic, systematic, cognitive and holistic aspects of organizations. The resource-based view suggests that human resource systems can contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific, produce complex social relationships, are embedded in a firm’s history and culture, and generate tacit organizational knowledge (Barney, 1992; Reed & DeFillippi, 1990; Wright & McMahan, 1992).

To this end, organizations need to clearly understand their abilities and accordingly create competence objectives in order to provide better IT services. Having this kind of organizational intelligence will also help the organization become more resourceful and productive. The competencies, applications, processes, technologies and practices support the decision-making processes in an organization. The term that is used for all these processes is ‘organizational intelligence’. This kind of intelligence can be used by the firm to cut its cost, improve its output, study buying patterns and sales trends, improve delivery and supply chain processes, and enhance customer relationship, among other activities.

In order to have organizational intelligence, an organization needs to have its strategic objectives and organizational competence working together. Any firm that wants to make an impact on the market, whether it is promoting a new product, improving its image or re-introducing an old product, has to use the organizational intelligence that it has achieved. It is this organizational intelligence that will help a firm to reassess, rethink, restructure, and reproduce its organization to attain maximum benefits.

**Organizational Competencies**

When we talk about organizational competencies, two major paradigms sit at the forefront of the strategy literature. The first paradigm looks at the concept of industrial organization economics, whereas the second paradigm looks at an alternative perspective - that organizations are fundamentally idiosyncratic, and over a period of time, organizations develop unique combinations of resources that allow them to ingrain distinctive competencies in themselves (Turner and Crawford, 1994). The concept of industrial organization economics accentuates that there are barriers to competition and the market trend will show effectively why it has the advantage over the competition. According to the second paradigm, an organization builds its own competencies from all the resources that are available to it. These resources may be physical assets of the firm like the equipment and the plant, or intangible like customer relationships, brand name or the technical knowhow. A resource is strategic when it amounts to a significant portion of the investment base of an organization and is not freely available on a competitive
resource market. Information Technology is now considered to be the key resource of an organization, and thus we need organizational competence to be able to exploit and use this resource sufficiently.

Although much research has been conducted on developing organizational capabilities and core competencies that are essential for providing value to IT services, not much has been discussed in terms of conceptual frameworks that highlight the notion of organizational competence at the organizational level (and not at the individual level). There are two main classifications in the literature. First, researchers who take the concept of competence at the individual skills level such as Boyatzis, (1982); Elkin, (1990); Klemp, (1980); Woodruffe, (1991). Second, those researchers who consider it important to develop competencies at the organization level. Researchers like Andreu and Ciborra, (1994); Ciborra, (1994); Hamel and Heene, (1994); Klemp, (1980); McGrath et al., (1995) fall into this category. Researchers who think of the concept of competence at an individual's skill level feel that these skills are the underlying characteristics of the individual and vary from person to person. The competence of one individual can be very different from another, even though they have the same resources available to them. These characteristics are the motives, traits and skills of an individual, their self-esteem, or their relationship with co-workers. All these traits make up an individual’s personality, which has, in turn, an effect on the individual’s competency within an organization (see Dhillon, 2008).

On the other hand, researchers who examine competencies at the organizational level need to develop a framework of core competence and capabilities within an organization. Here, the managers identify, develop, protect and deploy resources within a certain framework of values. These values get integrated into the framework of an organization and become a routine. The work does not stop even if the managers change. The organization can still run fairly well, even if some transition is happening at the top management or across the work force, or new technology is introduced.

From a strategic perspective, there are some problems regarding the managing and developing of new sources of capabilities. As Clemons (1991) suggests, IT is widely available, and it is difficult to keep an idea secret. Also, it is not possible to improve an idea fast enough for it to be a major key player. Two interesting issues have been raised by McGrath et al (1995). First, organizational capabilities can hardly evolve from an initiative unless those responsible can develop competence at what they are doing. Second, competence can be thought of as a purposive combination of organization-specific assets (or resources), which enables it to accomplish a given task. The level of competence of an organizational sub-unit plays a very important role in developing competence and organizational capabilities. It is further suggested that a useful indicator with respect to the potential advantage is when there is an increased convergence between the objectives of an initiative and its results (McGrath et al., 1995). Only if we see this convergence taking place can we say that the organization is developing competence. This will also put emphasis on the fact that competencies and desired organizational outcomes should be evaluated.

**How to build Organizational Intelligence?**

Intelligence is generated when data are collected and given meaning with respect to changing the potential range of organizational behavior (Glazer 1991; Huber 1991; Moorman 1995). This data may be market driven. It can be collected from the users about what they expect from an organization, what are their basic values, or what kind of competencies they would like to see in an organization that can provide them with better IT services. The firm can also build its organizational intelligence from collaborating with other firms to create new opportunities and superior services to its consumers. This kind of collaboration between two organizations will also help in improving the quality of a product and also in developing new products. An organization also develops its organizational intelligence through experiences that it has gone through in the past. These experiences help the organization to look at its policies and also see what works and what does not.

**Value-Focused Thinking for Organizational Intelligence**

The methodology that is used in this research is Keeney's (1992) ‘Value focused thinking’ approach. ‘What do we want to do and why’ – is the fundamental question that Keeney’s “Value focused thinking” method addresses. Keeney suggests that decisions are usually made from the list of choices where limited
alternatives are available. These choices or values also have the limitation of being based on constraint identification and subsequent alternatives that are set by the decision makers. Consequently, people forget what their original competence objectives were. The primary reason of involvement in any decision making process is to achieve a competence objective. Thus, it is important to focus on the competence objectives that one started with, and not find a compromise by making a choice between what is available. Only then will this decision making process be meaningful. Those values that have been underlining the various decision-making contexts were key to Keeney’s research (e.g. see Keeney, 1992; 1999). According to Keeney, instead of trying to find choices from current alternatives, it would be better to remain focused on the original objectives and proactively try to create new alternatives.

Value focused thinking proposes three steps to elicit and frame values:

1. Make a list and conduct interviews to see what the decision context should be.
2. These statements should be converted into objectives with a common format of an object and a preference.
3. These competence objectives should be established into a network of means-ends

In our research, we have used this three-step method to study the values that are associated with providing IT services in the organization by the users. Nearly seventy interviews with end users were conducted. Respondents were derived from a range of businesses in the US, including banking, finance, hotels and IT consulting.

Making a wish list: We begin by making a list of the user wishes in a given decision context. These wishes relate to what the users feel should be the competencies for delivering IT services thus leading to organizational intelligence. The best way to find out the user values is to ask the users themselves as to what they want. Usually people have different values and also might use different words to express them. Thus, it is important to ask as many different users as possible, so as to have a set that can accommodate many competence objectives. The invisibility of these values is difficult to assess. Sometimes, the values that a user has may be hidden. Several techniques have been recommended by Keeney to bring forth these hidden values. In our research we simply asked the respondents to elaborate on their responses. We did this by probing them at appropriate moments. Probing helped us in expanding our wish list. The interviewer had prepared several questions beforehand that were used for probing the respondents. These included:

- “What would your competence objectives be, if you did not have any constraints?”
- “What would you change from the status quo?”
- “What mechanisms would you use to evaluate competence?”
- “What are your expectations with respect to IT support?”
- “How do you tell if the services received are good or bad?”

While asking the respondents to create a wish list, we also asked the respondent to make a list of all the problems and limitations of the IT services. The reason behind asking the interviewee to create such a list was so that we could come up with competence objectives that would articulate their concerns. Three hundred and forty wishes, concerns and limitations were produced from the seventy-one interviews.

Converting statements into objectives: To convert these statements into competence objectives, we used the verb plus an object format. Here, the verb is the direction of change and an object is the target of change. Some of these competence objectives are statements that many of the users gave, and were essentially repeats of the statements given by other users. For example, a user wished that “everyone should not be dependent on one person for everything, and thus there should be an application support department that is fully staffed.” We can derive two competence objectives from this wish of the user: (1) The application support department is fully staffed (2) Everyone is not depending on any one person. Two researchers were asked to review every item on the list independently so that any ambiguities and redundancies could be removed. Four hundred and fourteen verb plus and object competence objectives were produced by this review and refinement method.
There are a lot of repeats and duplications in these competence objectives and the users are not always very articulate in expressing these values. These statements had to be put into categories, so that their meanings and values could be understood before they are clustered into competence objectives. Twenty-seven clusters of competence objectives were derived from these categories.

The mean-end competence objectives: The next step of framing values was to classify these twenty-seven competence objectives into two categories. These two categories are the mean competence objectives and the fundamental competence objectives. The criteria for this classification are based on whether the competence objectives are intermediate or fundamental. Intermediate competence objectives are those objectives that are a means to achieve another competence objective. Fundamental competence objectives are those objectives that can be assessed for IT competence. For instance, ‘increasing system consistency’ is a means objective. This objective, in turn, affects the ‘increase ease of use’ objective. In the end, eight fundamental objectives were identified. In Table 1 and Table 2 are presented the nineteen means competence objectives and fundamental competence objectives respectively.

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<thead>
<tr>
<th>Ability to add new system functions</th>
<th>Ability to decrease service response time</th>
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<td>Ability to decrease system response time</td>
<td>Ability to enhance problem solving ability</td>
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<td>Ability to ensure data integrity</td>
<td>Ability to ensure security</td>
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<td>Ability to establish service accountability</td>
<td>Ability to improve connectivity</td>
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<td>Ability to increase application knowledge of IT staff</td>
<td>Ability to increase business knowledge of IT staff</td>
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<td>Ability to increase system consistency</td>
<td>Ability to increase credibility</td>
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<td>Ability to increase data access</td>
<td>Ability to increase system access</td>
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<td>Ability to increase technical expertise</td>
<td>Ability to increase user access to system documentation</td>
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Table 1. Means Competence objectives for IT Services

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<th>Ability to enhance organizational functionality</th>
<th>Ability to improve business efficiency</th>
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<tr>
<td>Ability to improve communication with users</td>
<td>Ability to enhance the system</td>
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<tr>
<td>Ability to increase system reliability</td>
<td>Ability to increase ease of use</td>
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<tr>
<td>Ability to increase service availability</td>
<td>Ability to serve business needs</td>
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Table 2. Fundamental Competence objectives for IT Services

Articulating Organizational Intelligence through Values

The means-ends competence objectives network represents both qualitative and quantitative relationships value model. As in the case of many models, the competence model complements intuitive thinking, particularly in complex situations (Keeney, 1992). The value based competence model for organizational intelligence considers a set of fundamental competencies, measured through several lower level abilities \(a_1, a_2, ..., a_n\). The measure of fundamental competence would be \(C_1\) would be \(m_1\). A generic value model would take the form (after Dyer and Sarin, 1979):
\[ v = (m_1, m_2, \ldots, m_n) = \sum_{i=1}^{n} k_i v_i(m_i) \]

Where \( k_i \) is the ascribed weight for objective \( C_i \) and \( v_i \) is scaling that is desirable. The total value of \( m \) would be the resources and abilities required (i.e. competence) to achieve the overall competence. The benefit of IT services that an end user might receive can be evaluated based on this model, with benefits or value calculated as \( v = (m_1, m_2, \ldots, m_n) \). It is important to remember that the model presents a relative value, which needs to be specified. So a bad service would mean a value of 0 for \( m \). A perfect service will have a value of 100. In cases where \( v > 0 \), some users may have received certain benefits. Since different users will give different values there will be different models for different users. This model can, therefore, be used to design new services and hence forms a basis for capturing organizational intelligence and generating knowledge.

**Creating new IT services**

If there is a gap in the measures \( m_1, m_2, \ldots, m_n \), it provides an opportunity for the design of new IT services. Any organization can increase its competence, if such an opportunity is provided to it. The intelligence and knowledge in an organization are defined by such decisions. An organization can achieve success if the users can make a direct assessment of gaps in the IT services provided. If we look at an example from data in this research, it can be argued that ‘improving user involvement’ and ‘improving user documentation’ require something more, which is to improve communication. There is a possibility of improving the communication with the users, if one can improve the credibility of the providers of IT services. To increase the credibility of the providers of IT services, new mechanisms need to be put into place. To achieve the core organizational purpose, new services need to be created. Keeping a focus on the gaps that exist in the value propositions can achieve exactly this.

**Reconfiguring current IT services**

There is a difference between reconfiguring or improving an old IT service or designing a brand new service. And this difference is in the starting point. If we are reconfiguring or improving an existing IT service, we should place our focus on under-performing value propositions that exist, instead of worrying about those values that are non-existent. In the fundamental competence objective’s example, the fundamental competence objective is increasing IT service availability. In this example, the mean competence objective is to decrease the IT service response time. It’s clear that the top-notch IT service can be provided by the best possible response time. But the value proposition will need to be improved if the response time is too less than the given norm of about one hour. There is a scope for qualitative measures also. In order to improve its communication with their users, an organization needs to increase its involvement. The ‘user involvement’ is the value proposition that would have a qualitative measure. The value propositions provide the focus that will define the nature and scope of redesigning the existing IT services.

**Conclusion**

In this paper, we put forward a model for IT competence that is a unique combination of resources and abilities. Providing IT services can be improved using this model. We have identified different value propositions in this paper, which paves a path to measure competence value in IT service delivery. The combination of means and fundamental competence objectives helps build an intelligent organization, which is capable of sustained growth.
REFERENCES


