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Sonia Gantman (Vilvovsky)
Bentley University, USA, svilvovsky@bentley.edu

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KNOWLEDGE EXCHANGE IN OUTSOURCED ISD PROJECTS: THE BOUNDARY SPANNING APPROACH

Sonia Gantman (Vilvovsky), , Bentley University, USA, svilvovsky@bentley.edu

Abstract

This study is focused on intra- and inter-organizational communication managed by client organizations in outsourced information system development (ISD) projects. Previous research shows the importance of internal communication in an organization when it adopts an integrated IS. Outsourcing literature also notes the importance of managing communication and knowledge exchange with the vendor. However, these two types of communication have not been studied together, and their conceptual commonalities have been overlooked. The proposed research makes a unique contribution to the literature by studying the connection between internal and external communication in the same organization, and assessing the impact of yet third communication type, client's routine internal communication, on client's behavior during an outsourced project.

I show why different types of communication in an outsourcing organization may require different approaches to knowledge and to the process of its exchange, and explain why building successful communication practices in an outsourced project is more challenging for some organizations than to others. This is an original theoretical contribution of this study to outsourcing research. Quantitative analysis of data collected through a survey instrument will make a sound methodological contribution to boundary spanning theoretical reasoning which has been supported so far by interpretive qualitative research alone.

Keywords: Outsourcing, Boundary spanning, Knowledge exchange, IS development.

1 INTRODUCTION

Researchers and practitioners alike recognize the critical role of collaborative relationships in the success of outsourced information systems development (ISD) projects (e.g., Heckman & King, 1994; Quinn, 1999; Sharma, Apoorva, Madireddy & Jain, 2008). The boundaries between organizations are perceived as the most significant barriers to collaboration in this kind of project (Levina, 2001). Commonly, the client organization designates an IT manager, or a whole group of IT professionals, to outsourced project management. These people are responsible for constant contact with the vendor, communication of requirements and control over the project's progress. This highly complex job requires a whole set of different talents and skills.

An integrated information system aims to serve the strategic needs of the company; at the same time, it should meet a variety of the everyday needs of different stakeholders. Project managers therefore should understand the business as a whole but also be aware of various needs of prospective users who come from a variety of backgrounds, experiences and professional settings. Further, there is a need to establish a "common language" with the vendor so that the exchanged information is interpreted similarly on both sides of the interorganizational boundary.

Client's failure to either analyze the requirements or to adequately present them to the vendor compromises project quality, timeline and budget. Even if the system is eventually completed, it may not be a good fit with the organization's real needs. As a result, the system's adoption may pose a significant challenge, and the benefits of its use may be much lower than expected (e.g., Peled, 2001).

I argue that the problem of maintaining good communication with different stakeholders and the problem of effective communication with an outsourcing vendor have a conceptual commonality. Both of these problems deal with communication across boundaries: external boundaries between the organization and its outsourcing vendor, or internal boundaries between different occupational groups inside the client organization. I further argue that a developed boundary spanning culture, one that makes an organization successfully communicate internally over the course of its everyday business, also contributes to better internal and external communication during outsourcing projects and contributes to building more successful outsourcing relationships.

In this study, internal and external communication by an outsourcing client is viewed through the boundary spanning theoretical lens. Prior research acknowledges the importance of boundary spanning during outsourced projects (Levina & Vaast, 2005), and its effect on the quality of communication between a client and a vendor (Marchington, Vincent & Cooke, 2004). However, to my knowledge, there has been no attempt to juxtapose these two types of boundary spanning. Although many organizational settings and activities involve a variety of different boundaries, no previous research has addressed the distinct roles of different types of boundaries within the same organization or within the same project. My study addresses this gap by investigating the relationship between an organization's internal and external communication patterns. Specifically, I propose that an organization's approach to the boundaries among its subunits has an impact on the ways it chooses for handling its interorganizational relationships during outsourced projects.

There are several contributions this work can make to scholarship and practice. First, understanding the role of factors that are rooted in an organization's structure and culture beyond the project's lifetime provides deeper insight into the antecedents of a successful outsourcing relationship. Expanding the scope of analysis in this way makes an important contribution to the research on interorganizational collaborations, not just outsourcing arrangements. Second, uncovering the implications of client boundary spanning culture in the outsourcing industry, estimated at about \$35 billion in 2007 in cross-functional application development alone (Gopal & Gosain, 2009), will help practitioners make better sourcing decisions and more consciously leverage their internal communication experience leading to better relationships with outsourcing vendors. Third, showing how boundaries faced by the same organization may require different approaches to their complexity is a theoretical contribution to boundary spanning, knowledge management and outsourcing literature.

Finally, this quantitative study is built on theoretical reasoning supported so far by interpretive qualitative research alone, and therefore makes a methodological contribution.

In the following subsections, I address my selection of approach in more detail, elaborate on the main theoretical argument of the study and briefly present further research plan.

2 BOUNDARY SPANNING IN OUTSOURCED PROJECTS

Numerous publications from different research fields address various aspects and dimensions of ISD projects management in general and outsourcing ISD in particular. However, there are still notable gaps in the extant literature. In particular, the connection between internal and external communication patterns of the same organization is surprisingly understudied (Hillebrand & Biemans, 2003). Internal communication in organizations and interorganizational relationships are two expansive research areas, each accounting for dozens of scholarly and practitioner oriented publications, and using a wide repertoire of theoretical perspectives and approaches. Most of these theories, however, are tailored to specific contexts, such as internal organizational processes or asymmetrical contractual relationships, and lose much of their relevance when taken out of these contexts.

Unlike other theoretical lenses, the boundary spanning conceptual approach allows for comparing or juxtaposing internal and external communication patterns despite their contextual differences. Prior boundary spanning studies focus on communication among organizational subunits (Carlile, 2002; Schwab, Ungson & Brown, 1985), among organizations (Ancona & Caldwell, 1988; Levina, 2005), and among subunits of different organizations (Levina & Vaast, 2005). This flexibility makes the boundary spanning approach a natural selection for my research which is concerned with bridging the patterns of intra- and inter-organizational communication.

2.1 Boundary complexity levels and their applicability in outsourcing context

The boundary spanning approach to information exchange views communication of people who do not work together on everyday basis as *spanning a boundary* between *communities of practice* - groups of people engaged in a joint enterprise and characterized by a shared repertoire of concepts, stories and tools (Wenger, 1998). Specialization creates natural boundaries among such groups; however, spanning these boundaries is essential for information diffusion within an organization, and should be viewed as a key organizational competence (Carlile, 2002; Grant, 1996; Schwab et al., 1985). The success of boundary spanning practices and tools is not inherent in their characteristics but rather in the context when boundary spanning occurs (Levina & Vaast, 2005).

One of important characteristics of boundary spanning is the organization's approach to knowledge sharing across boundaries. An organization's perceptions of boundary complexity dictate its boundary spanning needs, and, consequently, its boundary spanning behavior. Carlile (2002, 2004) introduces and elaborates on the notion of boundary complexity in a theoretical framework for knowledge management across boundaries. This framework is specifically tailored to knowledge intensive contexts where new products are developed and information novelty is introduced. Figure 1 illustrates how boundaries become metaphorically thicker and harder to span as the novelty in the cross-boundary knowledge exchange increases.

The *syntactic* ("*information processing*") approach to knowledge exchange across boundaries implies that all participants understand and interpret information in a similar way. This approach fits the everyday needs of many organizations with static environments and virtually no information novelty. Organizing an effective knowledge transfer is enough for successful boundary spanning in this case. When novelty is introduced by one of the groups, it needs to be explained to others. Hence the more complex *semantic* ("*interpretive*") approach to knowledge at the boundaries recognizes that sharing knowledge is not sufficient and that in most cases knowledge exchange among people with different backgrounds requires explanation. Dependencies among people from different communities of practice create a need to translate knowledge created on one side of the boundary to another. However, it is still implied at this level that the parties across the boundaries have shared goals and that their

interests do not conflict. This may be true for internal communication of project stakeholders in a client organization, where individuals from different communities of practice share and explain their practices to others while working together on requirements for a new IS.

It may happen, however, that “the knowledge developed in one domain generates negative consequences in another” (Carlile, 2004, p.559). This situation calls for the most complex *pragmatic* (“*political*”) approach to boundaries. Efficient communication at a pragmatic boundary should provide a capacity for transforming the knowledge through negotiation of interests.

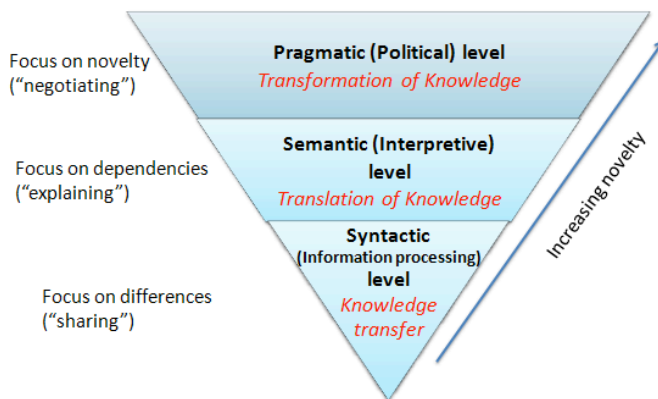


Figure 1. An integrated framework for knowledge management across boundaries. Carlile (2004)

2.2 Three boundary spanning contexts

This study considers three contexts in which boundary spanning occurs in a client organization. First, routine communication practices in the client organization determine the organization’s *boundary spanning culture (BSC)*. When the organization starts an ISD project, representatives of different internal communities of practice should work together for the purposes of the project. I call this type of project-related communication *internal boundary spanning (IBS)*. Finally, some client’s representatives communicate with the vendor, participating in *external boundary spanning (EBS)*. These three contexts may or may not require different conceptual approaches to knowledge exchange across boundaries, as described below.

Companies may have developed and successful BSC at any of the three conceptual levels, depending on their industry, size and other parameters. The lowest, syntactic, level of complexity is a good fit for businesses in stable environments, but businesses working in innovative environments are more likely to approach their knowledge exchange at higher levels (e.g., Shwab et al., 1985). IBS inevitably involves explanation of knowledge generated by one community of practice to others, which characterizes the semantic level of boundary complexity. It can be approached at the highest, pragmatic level as well, but not at the simple syntactic level.

Finally, neither the syntactic nor semantic approach is sufficient for EBS. Unlike BSC and IBS that unfold in a shared organizational context, EBS means work across a strong political boundary between two organizations with different goals and strategies. This communication involves a lot of negotiation and, often, conflict management. Therefore, an interorganizational boundary should always be approached at the highest, pragmatic complexity level. As Figure 2 schematically illustrates, a client organization with semantic approach to knowledge exchange needs to re-conceptualize its approach and learn to work on the pragmatic level for EBS; a client organization with syntactic approach faces the re-conceptualization challenge both for IBS and EBS.

I propose that organizations that approach their routine knowledge exchange (BSC) on pragmatic boundary complexity levels are more successful in developing effective IBS and EBS practices than those with semantic level BSC, and, in turn, than those with syntactic level BCS.

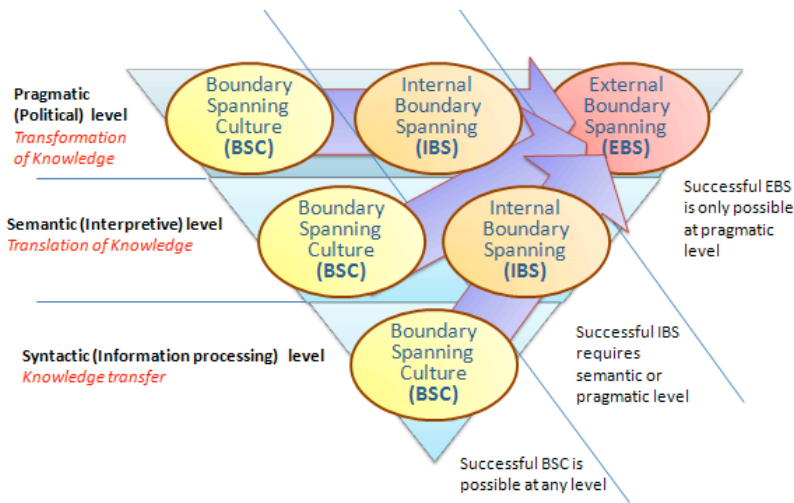


Figure 2. Three types of boundary spanning allow for different boundary complexity levels

3 RESEARCH PLAN

The data for this study will be collected with a survey instrument, which is currently at the last stages of development. The survey is targeted at client side project managers of recently completed or close to completion outsourced ISD projects. The instrument has been developed based on prior literature, and includes questions on perceived purposes of knowledge exchange and on communication tools that the client organization uses in each of the three boundary spanning contexts. The final decision on the most appropriate quantitative technique will be made after the data are collected. Considered options include co-variance and component based structural equation modelling. I plan to use factor analysis to convert each multidimensional measurement of level to one continuous variable with consequent use OLS technique for hypothesis testing.

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