

## Organizational storytelling and technology innovation

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### Abstract

*As technology innovation finds its way into increasingly diverse workplaces, the need to understand how project participants' views influence the change process has never been more pressing. Organizations are introducing technology change at an accelerated pace and increasingly diverse groups are finding themselves in uncertain territory as they attempt to collaborate on projects that fall outside their areas of expertise in an attempt to envision and then build new and complicated technology systems for their organizations. This paper explores the promising role of organizational storytelling as a framework to support the creation of shared meaning among disparate project members in an effort to mitigate the negative and costly impact that the different perspectives of team members have on innovation projects.*

*"Change the story, you change perception.  
Change perception, you change the world."*

*- Jean Houston*

### 1. Introduction and motivation

Innovation is the creation of new ideas, technologies or processes or their introduction into new settings. Information technology innovation in organizations is the adoption of IT-enabled tools and practices to bring value to the organization. IT innovations are rapidly spreading beyond their early concentration in manufacturing and financial services into healthcare, government, and education [21].

However, information technology innovation is expensive and often falls short of achieving desired outcomes [45]. Large-scale projects, in particular, are complicated and require significant collaboration among disparate organizational members who bring to a project varied experiences, interests and objectives. Conflicting priorities, uneven control of resources and the diverse backgrounds of participants often become barriers to effective collaboration. Such barriers are difficult to overcome when participants, who

frequently join IT innovation projects with high expectations and tremendous enthusiasm, become disillusioned (and even hurt) when they feel their contributions have been ignored or misinterpreted. Understanding the ways in which project participants express themselves and articulate their expectations about technology-driven change can improve the success of technology innovation projects.

Stories research has been proposed as a framework to advance our understanding of organizational sense making and communication [9, 11]. Research suggests that organizational stories and storytelling might aid technology innovation by revealing how the perspectives and organizational circumstances of project participants affect project outcomes [8, 9, 27, 28, 29, 30]. Stories research crosses disciplines and falls within the broader category of narrative analysis. It has enjoyed a recent popularity surge in response to the growing need to understand how people make sense of organizational experiences within the context of change [13, 30]. These studies draw attention to the influence of power, identity and knowledge on either personal experiences or project outcomes. IT researchers have applied narrative analysis to challenges associated with technology driven organizational change and systems implementation [27, 30, 40].

Studying narratives to reveal organizational relationships and practices typically excluded from formal change or technology documentation has carved for IT researchers a new and promising path of information systems study. Recognizing the value of this research to IT systems implementation, we review what has been learned thus far from both organizational and information technology research on the role of stories and storytelling in organizational IT innovation and suggest directions for additional investigations.

### 2. Research landscape

Increasingly, researchers are finding value in adopting cross-disciplinary perspectives [56]. Drawing on the work of investigators from many fields, however, adds a layer of complexity and requires researchers to

rationalize definitions within and across fields as they seek common ground with respect to terminology. To understand the contributions of diverse researchers, we must first understand their lexicons. Before we look at stories research, we will first review how researchers know and apply the terms.

## 2.1. Research Vocabulary

Narrative research spans many disciplines and each approaches research (and terminology) differently. To attempt a meaningful assessment of this broad body of work, we must understand how researchers define and employ their vocabulary. Relevant to this paper are four terms: *discourse*, *narrative*, *story*, and, as a corollary, *storytelling*. While some authors use *narrative*, *story* and *discourse* interchangeably, most select a lexicon to align with the research discipline and study framework.

*Discourse*: Organizational and IT researchers seldom employ *discourse* in their writing; instead they choose *narrative* as their key term and use *discourse* as its synonym, allowing true *discourse analysis* to remain the province of critical theorists and linguists. Epistemological or hermeneutic studies, for example, favor using *discourse* to describe the dialogue being studied. Discourse, researchers suggest, is the source of meaning, where all meaning is constructed through an exchange and sense making of dialogue. Consistent with the broad scope of the word, discourse research addresses macro questions of meaning [2, 6, 20, 32, 59, 60]. Discourse contributions are the relationship-based patterns of sense making that theorists have teased from detailed studies of text.

*Narrative*: Narrative enjoys wider application than either *discourse* or *story*. To some authors, a narrative is any exchange in which a past is being recounted or a future anticipated [9, 18, 20, 23, 24, 25, 26, 54]. To others, narrative has a very specific structure [49, 54]. Researchers in the social and health sciences, those exploring personal and organizational experiences and those interested in problem-solving most often choose *narrative* to represent the (typically verbal) exchange under consideration. *Narrative* is also preferred by both business and IT researchers. To some, it serves as a synonym for *discourse* or *stories*. To others, narrative has a specific, unique definition. Czarniawska argues that narrative plots rely on “human intentionality and context,” and are “based on a chronology – this happened first, then that happened next” [30 p847]. Narrative derives its value as a framework for analyzing texts in context to enable researchers to discern various organizational realities and the impact of such realities on change and IT implementation.

*Stories*: Some authors use *story* to label their work. For IT and organizational researchers, *stories* are not

surrogates *narratives* [4, 9, 13, 14, 15, 18], although Alvarez and Urla [1] see *stories* and *narratives* as related. They suggest that narratives are “stories about specific past events,” arguing that “stories follow a chronological sequence, and events are told in a linear order ... a story is always responding to the question *and then what happened?*” [1, p41] Reissman suggests we see “*story* as a particular kind of narrative that has a beginning, protagonists, and a culminating event” [1, p41, 54]. Derived from Martin [46], Dubé and Robey posit that an organizational story is “defined as a connected discourse<sup>1</sup> about a unified sequence of events that appear to be drawn from an oral history of an organization's past” [33, p3-4].

We've seen each author carve a slightly different boundary for *discourse*, *narrative* and *story*. While a labeled map may oversimplify this analysis, we can think about discourse as the broad geography of reality construction. Most dialogue, written exchanges and rhetoric are *discourse*. Narrative is fenced-in discourse. To become a narrative, discourse must acquire a particular structure: an original state, an action and an outcome must be present [30]. A story is a specialized form of narrative that includes the structure above and adds to it actors, agendas and influence. The influence potential of stories (and the barriers that mitigate influence) is the focus of this paper.<sup>2</sup>

The research reviewed in this paper originates in workplaces (observed stories) or interviews about workplaces (constructed stories). *Storytelling* is a key distinguishing point between observed and constructed stories. When stories occur within the organizational context, elements outside the story text (e.g. the story performance) earn a place in story analysis. Stories are seen as artifacts to be studied in the organizational setting. The researcher is an observer or outsider, able to assess (with some objectivity) the story, its teller's intended meaning and the impact of the story on the listener(s). While the significance of this difference is addressed later, the role of organizational context on stories communication should be noted.

Important contributions have been made in organizational story research. As we look at studies from both organizations and IT fields, we will use *narrative* and *story* synonymously to mean *a specialized narrative that includes an original state, an action and an outcome as well as actors, agendas and influence*. By assigning the multiple and diverse uses of these words a single meaning, we can turn our

<sup>1</sup> Discourse here refers to dialogue among organizational members and does not carry additional the meaning defined above.

<sup>2</sup> Myths and fables comprise an important part of the larger body of narrative research. However, each is beyond the scope of this paper.

attention to the contributions of this research without the distraction of contradictory word lists.

**2.2. Research overview: How stories shape technology innovation**

Researchers across disciplines have begun to seek a deeper understanding of organizational experiences and the impact that people, relationships and practices have on change processes and technology innovation [9, 29, 30, 48]. Three patterns of emphasis are emerging, as the body of narrative research grows:

1. *Power* (research focus: organizational politics, influence and control);
2. *Identity* (research focus: organizational culture production and individual organizational experiences), and
3. *Knowledge* (research focus: knowledge creation, management of intellectual assets and problem solving).

More than 100 studies were considered for this paper, from which a relevant sampling was selected for a more detailed reading. Their contributions, classified into the categories shown (Table 1), are now presented.

**2.2.1. Power.** Control of resources, recognition, organizational mission and vision, collaboration opportunities, employee relationships, and stakeholder influence are each elements of organizational power. Story research adds to the research on power by illustrating how power relationships shape technology implementation and organizational change. This stream looks at organizational politics, influence and control.

*Organizational politics* is exerted variously in organizations. Narrative analysis shows power at work by drawing attention to the juxtaposition of strategic IT value versus organizational status [3]; the negotiation of power among project participants [44]; how stories advance political interests [9]; as well as the ways stories “gives voice” to thoughts and ideas typically excluded from formal organizational scripts [61]. It also reveals the highly political environment of significant technology investment and large scale technology-driven change [30]. Narratives reveal how organizational members with multiple views influence requirements determination, project development, implementation and outcomes [15, 28, 41]. “Competing versions of reality and ... uncovering stories that remain locked beyond public view through the power plays of key actors” [30 p846] show how narratives advance our understanding of organizational politics.

**Table 1 - Research Summary**

	Authors
<b>Power</b>	
Politics Influence Control	<i>Avison &amp; Cuthbertson (1999)</i> ; Balagun & Johnson (2004); Boje (2001a & 2001b); Boyce (1995); <i>Brown &amp; Jones (1998)</i> ; <i>Davidson (1997 &amp; 2002)</i> ; <i>Dawson &amp; Buchanan (2005)</i> ; Ford & Ford (1995); <i>Hercelous &amp; Barrett (2001)</i> ; <i>Kowalik (1999)</i> ; Martin (1983); <i>Spicer (2005)</i> ; <i>Wagener et. al. (2004)</i>
<b>Culture</b>	
Organizational Identity	<i>Avison &amp; Cuthbertson (1999)</i> ; Balagun & Johnson (2004); Barnett & Storey (2002); Boje (2001a & 2001b); Boudens (2005); Boyce (1995); <i>Brown &amp; Jones (1998)</i> ; <i>Davidson (1997 &amp; 2002)</i> ; <i>Dube &amp; Robey (1999)</i> ; Ford & Ford (1995); Martin (1983)
<b>Knowledge</b>	
Creation Management Problem	Boyce (1995); Brown (year); <i>Dube &amp; Robey (1999)</i> ; <i>Alvarez &amp; Urla (2002)</i> ; Barnett & Storey (2002); <i>Brown &amp; Jones (1998)</i> ; <i>Davidson (1997 &amp; 2002)</i> <i>Schultze &amp; Leidner (2002)</i>

*Influence* (or *interpretive power*) research examines how stories shape organizational reality [13, 61, 62] by clarifying for members organizational values, beliefs and norms. It also reveals how organizational members use conversations to initiate change [36]. Davidson’s [28] work on requirements determination highlights the vastly different perspectives of project participants about what is important and why. She also considers the impact of time and new information on project participants’ ideas about change and project priorities. Further, she draws attention to the *interpretative power* of organizational leaders, particularly as they shape meaning. Her work is echoed in Dawson and Buchanan: “the scripting of compelling stories are therefore central to understanding the process of technological change as these stories influence the views of key strategic decision-makers” [30 p849].

Studying *control* reveals stories as inherently political. Organizational thinking is constrained by limits embedded in verbal exchange (both language and topic). Technology innovation is supported (and constrained) by conversations that affect participant sense making. Conversations shape technology by influencing the way participants *see* it [7]. According to Spicer “discourse shapes how the technology can be spoken about and understood. This process involves creating a fixed meaning and a set of uses associated with the technology” [58 p869]. Language is a means to exert control; innovation is controlled by organizational members who choose to share some information and withhold other information [5, 9].

Power, as manifested through control, interpretive power and organizational politics, has a significant impact on the implementation of technology systems. Through story research, we are able to write more completely about the multiple ways in which organizational power relationships have an impact on the development and implementation of information technology systems.

**2.2.2. Identity.** Identity research includes two perspectives: organizational culture and individual identity in an organizational context. It focuses on the constant negotiation of meaning as well as the interplay between the individual and the organization.

Stories help organizational members make sense of events that shape an organization's culture by revealing the context in which these events occur and are interpreted [9, 46, 47]. Of interest since the 1980s [31], *organizational culture* is now considered a key factor of technology innovation [55]. Stories often serve as agents of organizational culture by framing *the way we do things around here* [37]. Organizational culture is aggregated storytelling; stories that express personal sense making or test understanding accumulate over time to comprise an organization's biography [15]. Through the sense making process of storytelling cultural production occurs.

The shaping role of organizational culture is revealed when we understand better motivation [39], agency [41, 62] and organizational citizenship [34]. Stories research reveals the link between innovation and organizational learning [6]; how organizational mission and vision translate into meaningful action through manager sense making [13]; how managers internalize the cultural messages [5]; and how cultural boundaries shape external collaboration efforts [33].

As individuals, *identity* within and outside of work is important. Organizational members use stories to negotiate an understanding of organizational culture. Czarniawska says that "participants not only organize their world through ... narratives, they also perform stories that are consistent with their expectations and values [1, p43]. Narrative research has revealed the complicated views of workplace identity [12]; the negotiation of embedded morals and organizational values [46]; and the communication of cultural beliefs as well as values and acceptable behavior and attitudes [9]. Through stories, we see organizational culture shaping individual perceptions of identity [13, 33]; the extent to which members identify with their organizations [21]; how organizational members share their identities [25]; and the dependence of cultural and identity research on the organizational context [31].

Story research illustrates the ongoing negotiation that occurs as organizational members make sense of

their experiences and their cultural environments. Sense making and cultural production shape technology innovation because each influences how we experience technology, the possibilities we imagine for it and the role we believe it has in our lives. As Dawson and Buchanan note "narratives are a significant source of personal and collective sense making, and of valid scientific understanding in their own right" [30 p849].

**2.2.3. Knowledge.** Competitive advantage is tied directly to an organization's ability to leverage its core competencies [38, 51, 53]. Narrative studies that explore competitiveness have looked at knowledge creation, knowledge management and problem solving.

Because the collaborative efforts of organizational members underpin most *knowledge creation*, researchers consider this aspect of organizational life important. How interorganizational cultural gaps impede collaborative knowledge creation efforts [33]; how some development initiatives garner organizational support while others cannot [57]; as well as organizational innovation processes and associated measures of success [6] each are a research focus.

Narratives offer a framework to study *knowledge management*. Stories play a vital role in eliciting critical organizational information from members [38, 57]. How IT manages its resources and priorities [57]; how organizational members rationalize past actions and defend future plans [9, 13]; and how "narratives allow participants to bring order" [1 p43] illustrates the central role of stories in advancing our understanding of workplace knowledge.

John Seeley Brown told a workplace story to illustrate using storytelling to *problem solve* [18]. Alvarez et al. echoed Brown suggesting that "when confronted by unclear situations, people will often tell a story to clarify and explain" [1 p43]. "Stories are performed to make sense of equivocal situations and function as precedents for future actions" [9, p106], while narrative "can convey information indirectly which would not be understood or accepted if conveyed directly in literal and explicit terms" [12 p1287].

Stories connect people and ideas by engaging imaginations and emotions. Through stories, much can be learned about complex organizations: the competing agendas of project participants, the meaning making roles of conversations and the problem solving that occurs when organizational members collaborate [1, 35, 42]. Dawson and Buchanan quote Putnam [30 p849]:

*Narratives are ubiquitous symbols that are prevalent in all organizations. . . They are the vehicles through which organizational values and beliefs are produced, reproduced, and transformed. They shape organizational meanings through functioning as retrospective sense making, serving as premises of arguments and persuasive appeals, acting as implicit mechanisms of social control, and constituting frames of reference for interpreting organizational actions.*

Challenges exist, however, when messages shared through stories are not the messages listeners receive. Why signals become crossed and the consequences of misunderstandings will be addressed next.

### **3.0. Sense making and shared meaning differ (why knowing the difference is important)**

Some researchers assume that a story told is a story heard (and understood) as intended. However, stories are a two-sided equation; story effectiveness is dependent on the storyteller's skill and the message shared as well as the audience's ability to listen and perhaps, more importantly, the frames of reference through which listeners hear. How we understand technology is guided by a frame of reference, which shapes how we view the world [50]. Frames determine what is perceived as possible as well as what is not by serving as a filter for new information; individuals discard ideas that do not *fit* and give privilege to those that do. Given organizational members' different frames of reference [50], it seems naïve to think that all employees would interpret the same story in the same way. We believe there is evidence to suggest that any story told will be subject to multiple interpretations [27, 28, 46, 47]. That is, shared meaning is not an automatic outcome of either sense making or storytelling. Rather, it is a higher order extension of both. Organizations are comprised of disparate members, and project development exchanges may become troublesome if members' frames of reference preclude finding common ground.

Because storytelling is a process in which both tellers and listeners participate, understanding how stories can support sense making (e.g. individual understanding) and shared meaning (e.g. shared understanding) is important. Organizational members use stories to share priorities [28], challenges and goals [30]; conflict resolution [39]; sense making [8, 9]; and change agendas [5, 35, 41, 61, 62]. Phrases chosen and placed within the text, words emphasized or omitted, audiences addressed or excluded, time and location each play a part in conveying the story's meaning [9, 46]. By adjusting these multiple elements, storytellers alter story meaning. Effective storytellers make good

use of contextual factors. Less skilled raconteurs stumble over word choice and phrasing, frequently finding that tales do not communicate as intended. While a body of research on storytellers exists, there is little work on listener factors and less on shared meaning creation through story performance.

Shared meaning is produced through exchanges among organizational members in which a common understanding is built. Like a ravine spanning bridge, stories connect organizational members. However, for shared meaning to be created frames of references must align [50]. Davidson highlights the notion of frames differences in her review of project team members' perspectives. Her research illustrated how the three team members' points of view (shaped by their frames of reference) affected how they attributed the project's origin [27]. In a subsequent paper she extended her thesis, writing that "frames act as templates for problem solving as well as imprecise, conservative filters for new information" [28, p331]. In that paper, Davidson also traced how the story of the project evolved over time. Her work highlights how narrative themes and project stories evolve as project participants acquire new information or as their perspectives change as a result of influential exchanges and sense making.

Davidson [27] showed us that a single story has multiple meanings, which reflect storytellers' different frames of reference. She also illustrated how one person may tell the same story in different ways depending on the audience, the points he/she wishes to emphasize and to reflect evolving understandings and perspectives. Much of the conflict and frustration that occurs in project development may originate with the significantly different ways that individuals view the world. While perfect alignment among project members is not necessary (in fact it is likely not desired), when there is little shared meaning among project members it may impossible to move a project forward. To date, rather significant differences of perspective have largely been ignored [43]. As technology innovation finds its way into new increasingly diverse workplaces, the need to understand why disconnects occur and what might be done to resolve them has never been more pressing.

We suggest that stories possess unique characteristics to foster the creation of shared meaning by presenting a compelling argument to help listeners consider the world in a new way. Crafted storytelling may enable technology innovation practitioners to see more clearly value in another person's perspective. And, through these efforts, participants may be able to create a more collaborative environment that leverages better the diverse talents of project members.

#### 4.0. Multiple perspectives alters the approach

We have seen that stories can enrich collaborative innovation environments by serving as a channel through which meaning may travel. To explore further this promising strategy, we need to collect data on stories. Meaningful contributions will address three issues: organizational context, multiple voices as well as storyteller and listener perspectives.

Because stories represent organizations, Boje suggests that more complete images of organizations and relationships may be acquired *in situ* [8, 10]. Studies benefit when researchers observe stories in action where the storyteller, the story text, the story context, and the audience(s) reaction are recorded. Two story contexts can be logged: stories observed (e.g. the researcher observes passively a storytelling exchange) and stories constructed (e.g. the researcher interviews organizational members to elicit stories). Regardless of method, all stories are constructed to represent the storyteller's view. Storytellers, observed and interviewed, will include (or exclude) text to advance a particular perspective. As Wagner puts it: "stories [are] rhetorical devices...[where participants] will narrativize a particular version of reality in an attempt to convince the researcher of the influence of their perspective" [61].

To compensate for the filtered reality presented by a single storyteller, diverse sets of stories should be gathered. Organizations have multiple voices, many of which are excluded from formal organizational narratives [12, 50, 61]. While stories reflect the organization, its issues, relationships and priorities, no single story incorporates all perspectives. Multiple stories construct a richer understanding of events and organization members' interpretations of events. The two strands of story variance noted (different narrators will tell different stories and over time the story theme will evolve) also need to be considered [27, 28].

Finally, both storyteller and listener perspectives must be examined as listener interpretations will differ from storytellers' intentions. The Lego™ exercise is used frequently as a business school teambuilding task. The task: a Lego™ structure is placed in a box with one small window cut into each side. Some participants view the blocks through an assigned window, others are *architects* who recreate the structure by following the observers' directions. No team member ever has complete information. To build the *right* structure, each must share unique knowledge. The lesson: Successful collaboration depends on shared meaning possible only when team members *tell* effectively what they *see* and when they *confirm* what they *hear*. Stories support shared meaning construction by translating information among team members.

Although there is no such thing as a single *true* reality, by attempting to study and aggregate multiple realities, researchers may begin assess the impact of these realities on technology innovation projects. They may also see how frames of reference support (or impede) the creation of shared meaning through stories and storytelling. In the following section, we illustrate how frames of reference influence the potential for constructing shared meaning through stories.

#### 5.0. When stories collide

We have argued using prior research and logic that stories can help to create shared meaning. We have also suggested that for meaning creation to occur, technology frames of reference must share some alignment. We now examine our argument with a story to demonstrate how power, culture and knowledge differences manifest in different frames, complicating technology innovation efforts. Our story demonstrates that stories and storytelling do not inevitably result in shared meaning. This story is anecdotal but it is useful, we believe, as an illustration of the issues outlined.

At Independent School, technology innovation is high on the school's agenda. An influential donor provided funding for technology innovation. The donor, newly appointed to the school's board of trustees, achieved remarkable career success in technology and has a mission to improve technology use in fields important to him. Most IT staff are employed by the donor. While many of the School's employees are also alumni or parents of current or former students, just a few IT employees have a personal association with the School. The IT group is also generally younger than many of the School's staff.

The organizational culture of Independent School has two significant characteristics: a sense of family (e.g. a personal connection) and strong professional identity (e.g. excellence in education). The school takes great pride in caring for its employees, from principals to caretaking staff. Being *part of the family* is paramount and reinforced at many school events. That most of the IT staff are contract workers of the donor causes some quiet concern among employees; many of whom believe that IT does not understand *how we do things around here*. Of equal importance is the School's association with excellence. Considered an educational leader, with accomplished graduates, the School is proud of its reputation for excellence in all areas. Teachers are professionals with autonomous control over their classrooms. In many ways, *excellence* is considered to be synonymous with *uniqueness*. In most cases, the School rejects anything *off the shelf*.

In this organization, two markedly different frames of reference exist. IT is mandated to introduce an accelerated innovation process. Technology, they believe, will help teachers to be more effective. Teachers are focused on students and on growing caring citizens. The curriculum is sacred, to be evolved carefully by teacher teams not by *external* efforts to homogenize the classroom. The administrators possess similar convictions, believing the School and its staff is entrusted to their care. They respond strongly to perceived intrusions, however well-intentioned.

These disparate groups have been thrust together to *make* innovation happen. While each group values excellence, conflicting frames of reference about how to achieve this are causing confusion and frustration. Frustration is evident in the following episode of storytelling and the sensemaking that followed the exchange:

*The Director of Information Technology at Independent School presented to the Donor Team the school's technology plan. Understanding school strategy aids this fund raising unit in securing donations for school initiatives. The Director kept her presentation at a relatively high level, although she did include some discussion about VOIP plans, infrastructure and network issues.*

*The audience struggled to comprehend the presentation's technical elements, but very much appreciated the complexity of the IT management task. As the presentation concluded, the Director provided a couple of examples to illustrate the challenge of initiating change. The amusing stories highlighted the humor and stress of change, particularly technology related change. The group enjoyed the stories and laughed loudly at the Director's concluding comment: "Remember, it's not the technology people."*

Had the frames of references been aligned the Director and the Donor Team might have heard the same story and enjoyed the same joke. Instead, as subsequent discussions and comments from group members indicated, there were two quite different interpretations of the story. The Director meant "the technology works, you get on board," (e.g. "It's not the *technology*, people!") while the Donor Team *heard* "this stuff is so complicated that even the technical people can not figure out how to make it work." (e.g. "It's not the *technology people*.") Everyone laughed, but at completely different jokes.

This story illustrates how organizational factors like power, identity and knowledge can shape organizational relationships without necessarily fostering an environment of shared meaning creation. Resource control has been shifted out of balance, giving the Director a more senior position than many in the organization would expect (or like). Further, the

control she carries currently is at odds with the organization's culture of family (most of her employees do not work for the School) and professional identity (typically, the teachers are the ones placed on a pedestal, not administrative or IT staff). Finally, the IT group is upsetting highly regarded practices for knowledge creation, management and problem solving. In addition to fundamental world view differences, these groups have different practices for allocating resources, maintaining social order and building and preserving core competencies. Yet, each group believes it has the best interests of the organization in mind. Further, each group believes it is pursuing excellence. *And*, each group is concerned that the other is impeding progress toward excellence. As tension and frustration grow, technology innovation success becomes an increasingly elusive target.

Our question is: *Could stories and storytelling help align different frames of reference to create shared meaning, and in this way to facilitate collaborative IT innovation?* Bruner [17, p55] comments, "stories... are especially viable instruments for social negotiations." He further notes [17, p52]:

"[Narrative] deals...with the stuff of human action and human intentionality. It mediates between the canonical world of culture and the more idiosyncratic world of beliefs, desires, and hopes...It reiterates the norms of the society without being didactic...it provides a basis for rhetoric without confrontation. It can even teach, conserve memory, or alter the past."

The research we have highlighted suggests that such is the case with organizational attempts at IT innovation including that which is occurring at Independent School. Effective communication through stories and storytelling might help to reduce tension and resolve some of the frustration by working to align the disparate frames of reference among project members. Through storytelling, project participants might find common ground upon which to build shared meaning to allow them to look past tactical differences toward a longer-term common vision of success.

Researchers exploring how stories can aid this quest might consider how stories are told, by whom, to what audiences, the details included and omitted as well as the contextual factors that affect the story performance. They could study multiple storytellers and observe how stories are perceived by the listeners. Finally, they could evaluate with both storytellers and listeners what was said, what was intended and what was received. By working through multiple story-based sensemaking exercises, researchers and organization members might begin to overcome the

issues that inhibit IT innovation and help to build shared meaning among the disparate groups involved in these processes.

## 6.0. Concluding remarks

In this paper, we have outlined how researchers have increasingly found that stories and narrative analysis are helpful in revealing aspects of organizational relationships that influence technology innovation. Organizational politics, interpretative power and control; organizational culture and individual identity; as well as knowledge creation, knowledge management and problem solving shape the relationships of organizational members and influence the allocation of resources and priorities within their organizations. Story research has been applied effectively by both organizational and IT researchers to reveal the complicated implications of organizational relationships on efforts to create collaborative innovation environments.

Little research exists on the implications of story performance and listener interpretation. We argue that there is evidence to support the existence of multiple voices within an organization and that the stories of each are needed to form a useful interpretation of an event or situation. Pursuing these myriad stories and examining how audiences interpret the tales promises to reveal much about the complex ways in which organizational members approach project development. In particular, there is much value to exploring the ways in which frames of reference shape the way we hear and the ways that stories can assist in achieving sufficient frame alignment to allow shared meaning among disparate members to be created.

Organizations must seek new ways to find deeper understandings of the organizational processes that influence technology innovation. We consider narratives and organizational stories, in particular, to be effective in constructing a more complete picture.

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