

Narrative in Knowledge Management

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Introduction

This paper discusses an approach for using narrative as the basis for a knowledge management system. The basic concepts of narrative and storytelling are expounded. Meaning will also be discussed briefly before the system itself is introduced. Issues that the system does not deal with are then presented briefly.

The Role of Narrative

Narrative is fundamental to the human condition. Most humans understand the concept of stories as a means of describing things and events in the world, making generalizations, predicting events and explaining psychological and physical phenomena (Nair, 2003). It is how we make sense of our lives, and it plays a role in each individual's identification of self (Kerby, 1991). Jean-François Lyotard, considered the founder of postmodernist movement, went so far as to define science itself as a branch of narrative (Lyotard, 1984).

Prior to the development of a writing system that could reduce information to bullet points, spoken narrative was the only means of maintaining knowledge from one generation to another. Our natural understanding of spatial and temporal relationships made narrative an ideal tool to maintain both culture and technical know-how. Philosophical ideas found their transmission in allegory, fable, and parable.

Internally, we make use of narrative as well. Narrative provides our means of examining past events as well as being the medium for aspirations and desires, allowing us perceive possible futures and possible selves (Kerby, 1991). Nair describes narrative as a personally inexpensive means of trying out patterns of living, situations, and emotional reactions that one may never experience or want to experience in their own life (2003). Some psychologists now believe that humans possess two types of memory: one episodic (autobiographical) and one semantic (general knowledge). Episodic memory deals with the who, what, when, and where questions; semantic memory deals with extracted knowledge about how people and the world work (Pinker, 1997). It is episodic memory that drives and is driven by narrative.

There is often some confusion regarding the difference between a narrative and a story, and many authors, such as Denning, use them interchangeably. In this document narrative is structure lacking content (Plowman, 1999). The structure may be as simple as Aristotle's beginning, middle, and end, but it will be only a scaffold. A story features both structure and content. Elements such as characters, events, and locations provide examples of content. This differentiation allows many different stories to share the same narrative structure. Content can also be interchanged, allowing characters and events from one story to be placed in a different narrative structure, creating a new story. This property allowed Homer's *Odyssey* to be retold in *O Brother, Where Art Thou?* and the Hebrew *Exodus* to be retold as *Battlestar Galactica*.

Meaning, Construction, and Guidance

As with any system for transferring knowledge from one individual to another, there is always a question of conveying the correct meaning. Whenever a person is listening to or reading a story, their mind is continuously filling in any missing details using his or her personal experiences in a process known as narrative construction (Plowman, 1999). This process can be readily observed between the panels of a comic book where only limited information can be placed in each panel, and the task of completing the image is left to the conceptual knowledge that the reader already has in their mind (McCloud, 1993).

Because of this, it is impossible for the storyteller to ensure that the audience infers a specific meaning. This presents a problem for the knowledge management system, but it is a problem that exists regardless of system's underlying principle. Cognitive science adds to this the notion of qualia with a common example being whether or not one person's "sensation of red" is the same as another's (Churchland, 1999).

Meaning, however, can be guided (though there are no guarantees of effectiveness) through the application of cultural symbols. Symbols form the basis of the semiotic theory of culture ("culture as communication") developed by Claude Levi-Strauss (Duranti, 2002). Cultural anthropologists regularly work to identify the symbols used by a community, and careful application of these in the context of a narrative can serve to enforce the storyteller's intended meaning. As the readers or listeners of stories, we are often not conscious of these symbols or their effects on meaning, but even color can have a strong effect. This technique is identified by Plowman as "narrative guidance" (1999).

This all works well for anthropologists, novelists, and bards, but these skills are not typical, and should not be expected of a company's employees. Since basic story telling skills are innate, anyone can tell a story, but few can tell a story well. Some people don't even like to tell stories — written or aural. So we have a powerful technique that probably isn't going to be available due to the skill set it requires. Nor should it be encouraged; doing so may result in stories produced by employees that are replete with confusing, inaccurate metaphors and allusions.

Cultural symbols should remain a point of concern for companies engaged in international operations, however. Proofing by a member of the target culture should be done before any story is submitted from another cultural group. Failure to do so could unintentionally make the story a source of contention.

Building a Narrative KMS

It is unlikely that any single tool will appear that proves to be a good knowledge management solution. A collection of tools and conventions that work together is likely to be a more fruitful. One advantage this has over a single tool is that individual parts can be replaced as the organization's goals or operations change. It does have the potential of introducing more overhead for the IT staff; but the payoff should outweigh those costs.

Web Logs and Discussion Boards

The last few years have witnessed an explosion in the usage of web logs, or blogs. Since the appearance of the Slashdot: News for Nerds web site in 1997, blogs have become a common tool for

both individuals and organizations. At their simplest, blogs serve as a sort of online time diary that can either be made public or kept private for personal use. Advanced blogs allow multiple users, feedback on entries, indexability, photo galleries, file uploads and event scheduling. Entire communities have grown up around some blogs. One characteristic of blogs when compared to other types of web sites is a heavy focus on content over visual presentation resulting in web sites that tend to be very accessible to non-traditional browsers such as aural reader.

Blogs are excellent tools for capturing stories. They also allow the reader to add his or her own voice creating an interactive narrative. While we can always tell more than we can write down (Snowden, 2002), blogs provide a convenient alternative to telling stories around a campfire after a long day of being a desert nomad.

Functionality similar to blogs is provided by online discussion boards. These forums provide message exchange through e-mails. Archives of the various discussions can be browsed or searched via a web page. Commercial discussion groups such as Yahoo Groups and MSN Communities provide additional features such as file storage and a group calendar system. Some people may be more comfortable with these systems because their existing mail client can be used as the focal point for posting stories and reading responses.

But, as mentioned earlier, some people don't like telling stories, and some don't like writing blogs. There are many reasons why an employee might not wish to share stories. An organization's downsizing history, for example, may greatly affect his or her willingness to participate in sharing their experience. Unwillingness to use a blogging tool or discussion board can usually be addressed through positive reinforcement. Forcing the system is likely to reduce its effectiveness. Since knowledge has to be volunteered, not conscripted (Snowden, 2002), an organization's management must resist the temptation of requiring employees to use the system. Quality of the collected stories is likely to decrease greatly if the contribution is mandatory. Quality may also suffer if the blog becomes fashionable and employees compete for the most postings.

The ability to search entries in a blog opens up the possibility for locating points of expertise. Though not completely accurate, a search system could be used to match keywords with names in entries to find who posted the most on a given topic.

Social Networks

Social networking software has not yet reached its full potential, but growing popularity is likely to fuel further innovation. Using these tools, people create networks of people by establishing links to friends that use the system. One can then access a larger group of people by following friend-of-friend links.

The most popular social networking service at the time of this writing is Friendster. Friendster bills itself as a dating network asserting the theoretical premise that dating in your network will prove more reliable. The disadvantage is that any one person's network can easily total hundreds of thousands of people with even just a few connected friends. With such a wide pool of people, many may fail to see the difference between this system and associating with someone randomly picked from the Web.

The recently introduced Orkut system from Google adds a "trust" property for the interpersonal links. This offers a much less random alternative to Friendster's approach. Orkut also adds discussion

communities allowing one to meet completely new people that share common interests, but who may not be in their network.

Another social networking system that always exists in an organization is the informal personal network. These networks are subtle, being established while working together on projects or chaffing in the break room. Organizations are dependent on these networks, and the informal network often provides a competitive advantage (Snowden, 2002). If a social networking tool is made available, it is possible that the informal network will reproduce itself to some extent there.

So where do these social networks fit within a narrative KMS? By making the social network visible, people are able to determine who might know what. This creates a sort of index of who can tell what story. Trust coded links, such as those provided by Orkut, serve to help locate the most viable storyteller.

The “context gears” system proposed by Abbe Don (1990) offers an interesting look at how a network could be visualized. Don’s approach is to visualize characters and their interests as gears. The special relationship between the gears becomes such that the cogs representing characters are connected by the common interests they share. If a similar system were created for a social network, it could be integrated with the blogging tool to allow some relationships to be automatically created.

Online Chat Logs

The Colorado Department of Education has implemented an online service known as AskColorado that provides real-time access to a reference librarian. A user starts a live chat session with the librarian who clarifies and researches the user’s question as the user waits. A transcript of the chat is recorded so the user can access it on his or her return and so that it can be used for training purposes.

The relevance of this is that the transcripts are captured stories, and they were captured through no additional burden on the librarian or user. They are simple, but they are an important source of knowledge for the organization. With the penetration of instant messaging systems such as Lotus SameTime in corporations, a system similar to AskColorado’s could be designed to utilize the log files of employee chats.

Transcripts of chat sessions would not automatically be placed in the knowledge management system. It is important that employees not be distracted by the worry that they are being monitored. Each employee should be allowed to choose which chats to store in the system and be given the option to edit for content before storing. With a blogging system in place, chat transcripts could be posted in the form of a blog entry. With a blogging system in place, chat transcripts could be posted in the form of a blog entry.

Cracks in the System

The biggest issue concerning any knowledge management system is user acceptance. This concern takes supersedes even the technical hurdles, and has often caused the failure of otherwise sound systems (Dillon, 1996). The system must seem appealing to the employees. Employees will know that the system is supposed to benefit the organization, but will need to be convinced that it will benefit them directly, especially if it involves extra work. And if the system does require extra work, it should be

accommodated within the employees' regular schedules. No one will want to use a system that they are required to use in their free time.

Also missing from this system is a means of performing a quick assessment of the company's knowledgebase. Guesses at who knows what can be made from the blog and online social network. Since we can always tell more than we can write (Snowden, 2002), however, this assessment will always fall short of what is actually available. Also missing from the assessment will be the knowledge maintained and distributed by the informal break room chats.

Retirement of knowledge is also a concern that this initial design does not address. As time goes by, some of the stories held in the blog may no longer be useful or valid, and some of the links in the social network may have faded as employees left the company or developed new interests. The social network tool could be such that it asked the user after a certain amount of time if their friend or interest links were still valid. Records management rules could be integrated into the blogging system to transfer stories to an archives when certain conditions are met.

Conclusion

Superficially, this system doesn't appear different from any other knowledge management system. So what does the narrative buy? In short, it takes advantage of a universal skill that can transmit tacit knowledge without any artificial attempts to force the tacit into the explicit. Stories carry with them context and encourage inductive reasoning through one's personal experiences and schemas. The effectiveness of a knowledge management system focused around personal stories waits for testing. Storytelling, however, has proven itself as an effective tool for transmitting knowledge from one person to another since humans developed language.

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