Talking with an expert is an effective way to get up to speed on something new to you, but "old hat" to the expert. But how do you help your whole organization benefit from the tacit knowledge of those experts? Here, Todd Post of EduTech explains how his company has embraced storytelling based on the success that their client NASA has seen from systematically using the technique to spread organizational know-how.

THE IMPACT OF STORYTELLING ON NASA AND EDUTECH

How capturing and retelling stories spreads know-how

By Todd Post, EduTech

Some might argue that knowledge sharing should be simple in a company with fewer than 50 employees. The argument goes that if employees are all in the same office, knowledge exchange should come fairly easily, since employees observe each other working and can more readily ask questions. But, unfortunately, that's not always the case. The company I work for, EduTech Ltd., is a small business with about 50 employees, but we realized, by way of an emergency situation, that we needed to improve our knowledge exchange and retention. This article shows how storytelling initiatives have increased the level of knowledge exchange in our organization, as well as in NASA, a much larger government agency.

EduTech realized its knowledge-sharing problem when we underwent a flurry of staff departures – including the manager of the contract and several key personnel – on the eve of a large conference we're contracted to put on annually for the US Department of Education. The weeks before the conference were anxious times at EduTech. We shifted experienced personnel into the vacant leadership spots and asked them to work long hours and meet tight deadlines. This episode was enough to force us into acknowledging our own deficiencies in capturing internal knowledge, and the irony was that one of our other contracts focused on doing just that at NASA.

EduTech produces a storytelling magazine for NASA called *ASK*. The success we've had with it has allowed us to examine our own problems holding onto knowledge. Right there in front of our noses was a successful model to emulate. Since we knew how to do storytelling for others, why not give it a shot at home?

Applying learnings

So we did. *What You Know* is EduTech's own storytelling magazine, produced internally and published on our intranet. The first story published was by Takako (Tako) Lewis, who had the dubious honor of stepping into the vacant management slot on the Department of Education contract mentioned earlier. An excerpt follows:

After saying goodbye to our colleagues and then taking over the project, we soon realized that many of the more crucial tasks had not been completed. For instance, the registration information was downloaded from the Internet into an Access database. During our transition, the Web site for the meeting was being moved from EduTech's server to a third party. We now had to rely on someone else to maintain the registration site that EduTech developed. Downloading the information proved no easy task as the system would crash regularly or delete previously-saved information.

Tako described these and myriad other problems she and her staff had to solve, all the while reassuring the nervous client that our company was not melting

KEYPOINTS

- NASA and EduTech have found that internal magazines covering anecdotes from organizational experts spreads tacit knowledge around effectively.
- NASA found that its project managers were very willing to contribute stories to the magazine, probably because they learned their skills by drawing on years of experience and other managers' advice.
- Using stories with metaphors allow an entry point into an issue that might seem too intimidating to confront on the surface level.
- To find stories worth repeating in your organization, find people who have personal knowledge that you want to make public.
- Capturing and re-telling stories is an effective way for an organization to hold onto tacit knowledge, such as that contained in soon-to-be retired employees.

down. The story was intended to make sure that anyone who works at EduTech understands what to be aware of when inheriting a project at the last minute. Because we conduct several of these conferences a year, this was an important story to kick off *What You Know*, and entirely appropriate given the impetus for the project.

What You Know has grown as people provide stories that are important to share with their colleagues, or when issues come up that make it apparent we need to capture knowledge for the good of everyone. For instance, we had an unsuccessful experience pulling together parts of a proposal for new business. In the post-mortem analysis, it became clear that there wasn't enough coordination among the team members. They've written stories about the experience, and the hope is that future teams will learn from their mistakes about what "not to do" by reading these stories.

Knowledge sharing at NASA

The problem at EduTech is that specialized knowledge is often only one-person deep. Similarly, NASA is grappling with a retiring workforce, taking away years of knowledge that's never been captured. People at NASA have understood this for a long time, but few have developed solutions that appear to be solving the problem. One exception is the work being done by Dr. Edward Hoffman, the Director of NASA's Academy of Program and Project Leadership (APPL). *ASK Magazine* is being sponsored by Hoffman as part of the knowledge-sharing initiative he's created under APPL.

Five years ago, Hoffman began collecting stories by NASA project managers for his book, *Project Management Success Stories: Lessons of Project Leaders.* The project managers whose stories appeared in the book ranged in experience from the Apollo era to the present. The story format Hoffman used for capturing lessons learned was widely praised throughout the agency, both in and out of the project management community.

The other player in this story is Dr. Alexander Laufer, my colleague at EduTech and Hoffman's co-author. Laufer was asked by Hoffman to help him build a knowledge-sharing community among project managers throughout NASA, and to do this by using storytelling. This included organizing national forums and workshops at the individual NASA centers around the country, and by producing a storytelling magazine published on the APPL Web site.

ASK Magazine grew out of this broader vision by Hoffman and Laufer of using storytelling as the glue to hold together the knowledge-sharing community. Without a community to share the stories, what's the point in telling them? But to build a successful knowledge-sharing community, members of the community must buy into the premise that one can learn something from stories, and that there's valuable knowledge that can be transferred in this format. NASA enjoys buy-in, at least in the project management community.

Why is storytelling so appealing to project managers? Many successful project managers at NASA have never even cracked a book on project management. The best project managers draw mostly from years of personal experience, more than anything else, when faced with a problem to solve. Because their knowledge is typically personal, this is what makes it ideal for capturing in a story. Stories are, after all, personal.

Storytelling in action: Marty Davis

Marty Davis has been a project manager at Goddard Space Flight Center for almost 30 years. He's been in charge of the Geostationary Operational Environmental Satellite program (GOES) going on 10 years. Davis will retire soon; in fact, he could retire at any time, but he enjoys his work and says he doesn't have a plan yet of what to do once he leaves NASA. Lucky for the agency! Marty Davis is a perfect example of one of those people we hear about in government agencies with a wealth of knowledge in his head and unless someone bothers to try and capture it, this knowledge will go when he does.

We published Davis' story in *ASK Magazine* and focused on reviews. The project review process at NASA is extensive, but many of the reviews are redundant. In an era commonly referred to as "Faster, Better, Cheaper" at NASA, few project teams can afford to spend precious time and resources on anything less than mission critical.

Maybe because Davis is close to retirement, he feels he has the freedom to experiment with things that other project managers consider too risky. The point is that Marty Davis tailored the review process on one of the GOES projects in a way that

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no one else has done before. That could prove valuable to other project managers. Marty wrote:

Some of our management at Goddard thought I was too involved in specifying what the composition of the review team should be. Indeed, I did specify the composition, but getting good people was the whole point as far as I was concerned. I was assigned an internal co-chair and recommended an external co-chair, and I told the internal co-chair that he could have seven members including himself, and I said the same to the external co-chair. I also said to them neither of you can duplicate the same technical specialties. If one of them had a thermal person, the other could not. If all this sounds imperious, well, I've been at NASA going on close to four decades and when you've been here that long, you learn that to get what you want sometimes you have to get into the details.

How I got this story from Davis is an interesting story in itself. He didn't come to *ASK Magazine* begging to tell it. At one of the knowledge-sharing meetings that APPL sponsors, Davis talked about tailoring the review process during a roundtable discussion. I knew right away this was something unique, so I suggested a story about it. Davis hesitated to share his experience, not because he didn't think it was worth having such a story in the magazine, but he just didn't feel he had the time. He was busy. But, he finally agreed to meet with me at Goddard one Saturday. We sat in his office and with my tape recorder running, he told me how he tailored the review process and the effects it was having on the GOES program.

We published the story in an issue dedicated to reviews. Shortly thereafter, Davis received a call from another project manager at a different NASA center. She had read the article and was intrigued by it and wanted to get more information to see if she could try something similar on her own project.

In an institution like NASA, with centers located in different parts of the country, it's possible that the story of what Davis did on his reviews might never get to the other centers. *ASK* is one way of passing that along. Knowledge-sharing meetings are another, but a magazine can be distributed across the agency and reaches more people than traditional meetings. Since that's the objective, a magazine like *ASK* is certainly a useful tool for spreading key knowledge throughout the organization.

When to use stories

The important thing in any knowledge-sharing initiative is to target people in your organization, like Marty Davis, who have personal knowledge that you want to make public. But it's not just about targeting the right people. It's the type of knowledge you are going after if you want to get the most out of the storytelling format.

Storytelling is a way to capture what's unique, and what's unique per individual is tacit knowledge. Marty Davis told two stories about how he tailored reviews: the first about what the review process became once he tailored it and the second about how he got it to be that way.

This second one is what you need a story to capture. For the first, a cookbook approach will do just as well because anybody can write instructions on how to conduct reviews, but is there an instruction for how to be creative with the instructions? Telling a story about how he did this, Davis empowers his readers to think outside the box on their own projects. The project manager who contacted Davis would have to tailor the reviews in a way that applied specifically to her project. How she did that would be as unique and personal as how Davis did it for his project and merit a story of its own.

Sometimes the stories that have the most powerful impact on people in an organization are not directly about what goes on in the organization. Examples at EduTech and at NASA make this point.

Approaching an issue from the side

Metaphors allow an entry point into an issue that might seem too intimidating to confront head on. It's the idea of looking at things on the slant, as Emily Dickinson liked to say of poetry's power to unlock secrets of the heart. Metaphors displace context just enough so that we can look at a problem, an issue, or a situation that may apply to work, seeing it in its distilled essence. See sidebox,

Using metaphors to explain difficult situations

At one of the knowledge-sharing conferences I attended for NASA, Dougal Maclise, a project manager at Ames Research Center, told a story about a time in his life when he worked for the Portland City Public Schools in Oregon, designing equipment for disabled children. One of his assignments was to work with a blind boy. The story he told was called "What's a Ceiling?" The title comes from this 10-year old boy's question when Dougal asked him to point to the ceiling in his house. The concept of a ceiling was something entirely new to the child.

As Dougal described walking with the boy from his house to school, it became clear that the real subject was about risk and defining the limits of risk, or in some sense, redefining them. Although he didn't explicitly refer to NASA until the end, it was transparent to everyone in the room that there was much in common with the story Dougal told and the plight of a NASA project manager. We eventually published this story in *ASK* almost exactly as he told it at the conference and it has received more feedback from our readers than any other story we've published.

page 28, for one example of this.

Karen Booker was hired by EduTech to help Tako Lewis with the conference I referred to at the beginning of this article. During an informal meeting shortly after she was hired, Karen told us that earlier in her life she had worked as a helicopter mechanic in the Army and served in the Desert Storm conflict. It seemed like a far different experience than anything she was doing with EduTech, and so I asked her to write about it and see if she could relate it to some of the work she was doing as a meeting planner.

Karen turned in a story for *What You Know* about the difficulties she faced earning respect as a helicopter mechanic during training. As the one black woman in a class dominated by white men, she had to deal with both sexism and racism. The power of Karen's story is how she persevered and graduated to be one of the best mechanics in her class. She reflected:

My squad came to the slow conclusion that I was here to stay and they would just have to get used to that fact. What a little recognition will do for your ego and self-esteem! After that, I was so confident in my work, and my squad was confident in me as well. Soon, I had to remind them that I was a black woman and "No thank you guys, I don't care to hang out at the local redneck bar with you after work. But I appreciate the offer." Isn't life funny?

This is an important story for EduTech. Until last year, we were officially an 8(a) company, meaning we were classified as a minority-owned business. We are still a minority-owned business, but having graduated from that classification, we now compete against a much broader field of companies. EduTech's struggle to compete and gain respect outside the 8(a) arena mirrors Karen's struggle while she was training to be a flight mechanic.

Some issues aren't easy to discuss. Race is one of those that automatically make some people uncomfortable. No matter how progressive an organization sees itself, there are things many people would prefer just to ignore. Stories that serve as metaphors for work-related concerns provide room to enter a discussion about these sorts of issues as they affect the work environment.

The storyteller and the editor

In both the EduTech and NASA initiatives, we've taken the view that the stories we publish should be well told, as well as interesting. We've adopted a quote used by CNN News, "It's not just enough to have a good story. We have to be good storytellers."

Stories will only transfer knowledge when the reader is interested in learning from them. To get readers interested, it's crucial to produce a product they consider worth their attention. The storyteller must balance the need to provide useful knowledge, but in a way that captivates readers and encourages them to keep reading.

Our approach to storytelling is different than many others in the KM field. We use editors to draw out meaning and detail out of the stories. This doesn't mean we're scripting the stories; we're editing and that's a big difference. We publish only what the storytellers agree accurately represents their ideas.

Plenty of people have important stories to tell, yet lack the facility to tell it in a way that highlights what's most important. We don't want their stories to be lost. It's naïve to think you can turn anyone loose to tell a story who has no experience at it and expect a coherent narrative to flow out in a natural way. People, after all, get advanced degrees in writing stories.

Before I was hired to be the editor of *ASK Magazine*, I knew little about knowledge management, but that didn't seem to bother Ed Hoffman and Alex Laufer. They felt we already had enough project-management expertise between them – what was lacking was the creative component to make the stories not only substantive for our audience, but also compelling. So far no one has complained that the stories have failed to capture important knowledge.

Capturing and telling effective stories: lessons learned

- For storytelling to be effective, the people hearing the stories must agree with the premise that valuable knowledge can be transferred in this format and then taken back to improve the way they work.
- Find people in your organization who have learned from others about how to do their jobs. The personal nature of their experiences in the workplace usually make useful stories for others.
- Sometimes the stories that have the most powerful impact on people in an organization are not directly about what goes on in the organization. Metaphors are a way to confront difficult organizational issues.
- Stories will only transfer knowledge when the reader is interested in learning from them, so make the effort to draw out meaning and detail in stories to make them entertaining and effective.

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