Understanding and Supporing Knowledge Work in Everyday Life - By: JEFFREY T. GRABILL & WILLIAM HART-DAVIDSON
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Understanding and Supporting Knowledge Work in Everyday Life

Our purpose in writing is two-fold: (1) to introduce this audience to the Writing in Digital Environments (WIDE) Research Center, and (2) to make an argument about the importance of understanding and supporting knowledge work for professional and technical communicators. We are particularly interested in what knowledge (writing) work looks like in multiple contexts—for instance, in civic organizations as well as in corporate organizations— because contemporary social and community contexts are dependent on high-quality knowledge work. This explains our interest in "everyday life."

The WIDE Center
We are researchers and co-directors of the Writing in Digital Environments (WIDE) Research Center at Michigan State University. The Center has taken up the problem of how to study writing given new and changing digital and networked information technology tools and environments. We study how the use of digital technologies change the processes, products, and contexts of writing. Fundamental to our approach is the development of information and software tools as a deliverable of our research. These tools and resources, generally speaking, leverage functionality associated with social computing systems to support writing. WIDE's goal is to take theories and research methods that have served the community of writing researchers and place them into the hands of writers. We want these intellectual tools to be useful for writers in a variety of real-world contexts.

We orient to writing in particular ways as well. We study writing as a verb, asking how can we best do it and how can we help others to do it better. We understand the activity of writing to be carried by a variable semiotic (e.g., multiple media), and we understand the activity of writing to be epistemologically productive. We are interested, in other words, in what writing does, not in what it means. Finally, we tend to be much more interested in how groups

write rather than in how individuals write.

Writing, Groups and Knowledge Work

With the space that we have, we would like to share particular ways that we orient to the concept of "writing" and to do so by way of examples of knowledge work in distinct domains of everyday life.

Perhaps the most significant idea for us is the notion of "knowledge work." Knowledge work is typically understood as "analytical" and thus requiring problem-solving and abstract reasoning, particularly with (and through) advanced information technologies. Knowledge work, therefore, is the making of largely discursive performances that, quite literally, do work. We are interested in understanding the activity of knowledge work and in rendering that activity visible to those who are engaged in that activity because we suspect that knowledge work looks like writing (indeed, often is writing) or is substantively supported by writing. Writing is how knowledge work carries value in organizations.

We provide two examples to make visible these claims about writing and knowledge work. These examples are drawn from a series of small studies conducted with organizations that we understood to have knowledge work problems.

Teachers for a New Era

"Teachers for a New Era" (TNE) is the title of a multi-year initiative undertaken by the School of Education at Michigan State University with support from the Carnegie Foundation of New York. The aim of the TNE project is to create and disseminate teacher knowledge standards to guide the education of future teachers. In terms of writing and knowledge work practices, the knowledge workers in this situation are teachers and teacher educators, and the writing concerns the use of teaching standards for both teaching and learning. When the TNE team approached us in September 2005, they were concerned that the standards they were writing would have no impact on teaching and learning (and this makes sense: how many of us have written documentation and standards documents that sit on bookshelves?). They asked us for help in creating standards information that would be used.

For our study, we adapted an interviewing method known as contextual inquiry with the aim of discovering how teachers and teacher educators reported using the standards and integrating them into their work practices. We also gathered sample artifacts – documents representing typical work-product or guidelines for work – from the participants when possible. One key finding is that teachers and teacher educators re-appropriate the standards for

their own purposes. In other words, standards do not drive changes in teaching practice in a linear, uni-directional way. The standards are not a starting point. Instead, standards are used as a way to explain or justify teacher practice, and even more interestingly, as a tool for conversation among teachers as they develop materials. Standards (text) are useful to the extent that they can be re-appropriated and used in other texts—and also linked to still other texts that teachers write. Because of this, we recommended to the TNE team that standards be presented as a means for empowering users and helping them to do their work, rather than as another set of mandates forced upon them. Our recommendation took the form of a new software tool that eventually came to be called the Literacy Resource Exchange (http://tne.wide.msu.edu). This system allows teachers and teacher educators to share commonly-used materials such as lesson plans, syllabi, rubrics, and other "working genres" in an environment where links between these materials and teacher knowledge standards can be made explicit.

The Literacy Resource Exchange (LRE) is an instance of what some call a "Web 2.0" approach to software and writing. What we mean by this is that because the network has become the computer (software is distributed, not localized on your computer), software is now performed by users (writers). More importantly, groups of writers can more easily perform (write) together with these new tools. And one of the things that users can write is the software itself. In making the LRE to support the coordinated writing work of teachers, therefore, we tried to give users a larger role in developing content, determining direction, and identifying value (see figure 1). Accordingly, we tried to give sponsors—in this case the TNE team—the role of providing technical support and making scaling decisions. But here is the critical argument we want to make: in this new way of working, technical and professional writers are perhaps more important as sponsors than users. To phrase it differently, we are all certainly users (writers) in these new technological environments. But we argue that it is an important responsibility of technical and professional communicators to sponsor (design, write, maintain) the writing environments for others. The implications of this claim are enormous, we think, for the place of professional communicators in contemporary and future knowledge contexts.

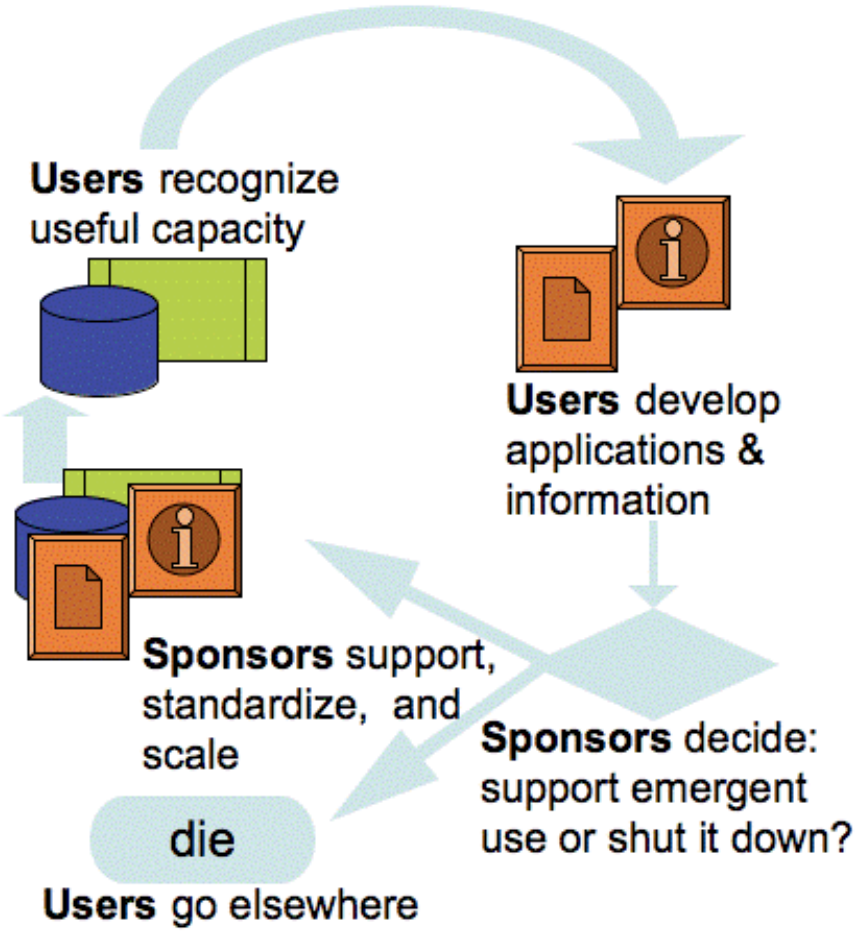

Figure 1: The Roles of Writers in Coordinated Software Environments

Grassroots

We like to use examples from civic contexts because they clearly show the expansive role of technical and professional communicators in a knowledge society, and so we conclude with just such an example. This one comes from a larger research project designed with citizens information communication technologies to support their knowledge work in communities. We studied an existing initiative called CACVoices (http://www.cacvocies.org), a public website that hosts databases and other types of public information, with the goals of improving its usability and usefulness. Like many data-rich tools, CACVoices provides an array of options and languages for non-expert users. Once users find and access specific database tools, they are confronted with interfaces and language that demand expert users. The problems suggested by these interfaces are substantial. Bad interfaces and tools that do not support complex work are disabling technologies. Citizens writing to change communities need to do much more than navigate clearly and cleanly. They must have sophisticated interpretive skills for text,

visuals, and data displays. They must also be able to produce complex documents—reports, letters, issue summaries, digital video. Very few individuals have these literacies. But groups of people do, and they can be highly effective if they have the tools smart enough to support how they write together.

In addition to working toward a more useful civic data tool, we also created new software, called Grassroots, that addresses a need we saw because of our study: a need for groups of citizens to be able to write maps. Grassroots is intended to enable communities to name, locate, and thereby create maps of their communities using variables of their choosing. Currently in our community, there are lots of geographic information systems tools that allow people to make maps of data. But none of these tools allow people to map data that they create or that is of interest to them, as distinct from what is interesting to those who make large public databases. Because the use of these tools is a fundamental, inventional activity for many community-based organizations and because these maps are often used for other purposes—including as part of documents—Grassroots is both writing software and an important participant in the knowledge work of a number of organizations.

Figure 2: Neighborhood Cleanup Block Captains

Figure 2 represents a typical use of Grassroots. What is represented in the map is the location of neighborhood clean-up block captains (those individuals who organize neighborhood improvement events). We like this map not because it is meant for display to the public on a website or in a report or brochure. We like this map—this use of Grassroots—because this map is not meant for a public audience. Rather, this map is a working document within the

organization that enables it to track work. This is an organization that regularly uses maps. Some are electronic, but others are paper maps hanging on walls. The existing electronic tools that they have will not permit them to create the sorts of maps shown in figure 2. And the paper maps are not editable and reusable in other electronic documents.

While the use shown in figure 2 is a simple example, we like it because it shows clearly how a tool like Grassroots can support more complex writing work by groups. Grassroots as a writing tool represents an attempt to make the construction of a complex genre (a map) more accessible for ordinary citizens. In addition, perhaps the most exciting feature of Grassroots is how it enables the sharing of maps within and across groups, teams, or communities. Drawing again on the Web 2.0 value of re-use, every map created by a Grassroots user can be the basis for another map. Therefore, groups of users can collectively create and edit maps by giving others' the ability to add or change things about the map's contents or its features. In this way, for example, a group might choose to use a map to augment other information they already publish and maintain, thereby turning a map into a database. Furthermore, in order to make maps easy to find once they have been created, users can add descriptive "tags" to create an alternative to a controlled-vocabulary taxonomy. Each of these features and functionalities enables group writing, collective intelligence, and the knowledge practices of organizations.

The story that these examples allow us to tell is a story about the centrality of writing to knowledge work. We hope these examples also make clear why we see writing as fundamental to understanding knowledge work and why we see knowledge work as a useful descriptor for the group activities we see in all sorts of contemporary organizations. This is also a story about writers and the professions of technical and professional writing. One of our goals as a research center, therefore, is to visualize these types of complex writing activities in order to help people learn how to write more effectively. But we are also interested in putting better writing tools in the hands of professional communicators, and in the process, helping professional communicators make better arguments to their colleagues and managers about the essential role that writing and other forms of communication play in every knowledge organization and in every domain of a knowledge society.

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