“ABOUT US”
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Creating Software Documentation

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About the Journal

Technical Communication is a peer-reviewed, quarterly journal published by the Society for Technical Communication (STC). It is aimed at an audience of technical communication practitioners and academics. The journal’s goal is to contribute to the body of knowledge of the field of technical communication from a multidisciplinary perspective, with special emphasis on the combination of academic rigor and practical relevance.

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- **Applied theory** – original contributions to technical communication theory
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- **Bibliography** – reviews of relevant research or bibliographic essays

The purpose of Technical Communication is to inform, not impress. Write in a clear, informal style, avoiding jargon and acronyms. Use the first person and active voice. Avoid language that might be considered sexist, and write with the journal’s international audience in mind.

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Technical Communication and Practical Wisdom

Coincidence forces me to address two topics in this editorial that are hard to combine. I will do it and let the contradiction speak for itself. The first is a book about practical wisdom I recently read, which made me think about technical communication and also about social sciences and humanities in general. The second is the external recognition for this journal, as it shows in its latest impact factor in the Web of Science and an APEX Award of Excellence for the recent special issue on Professionalization.

**Practical Wisdom**

The book *Practical Wisdom* by Barry Schwartz and Kenneth Sharpe (2010) has an image of Aristotle on the cover because the concept of “practical wisdom” goes back to Aristotle. Schwartz and Sharpe discuss the importance of practical wisdom predominantly in professional contexts. Practical wisdom involves a thorough understanding of purpose—why am I doing this job, who am I serving, and why—and the willingness and ability (“will and skill”) to always do the right thing. Practical wisdom is not institutionalized but is part of the professional identity of professionals. People need practical wisdom to live their lives, and, more specifically, to do their jobs well. The book is full of convincing anecdotes about people who do or do not right in professional contexts. Many of those anecdotes show that empathy is a core competence for people who want to develop their practical wisdom. But it is more than empathy: it may also involve finding a balance between empathy and detachment.

Professionals might already start developing practical wisdom during their education and may further develop it on the job. Practical wisdom is based on experiences, but we can only learn from experiences when we have the opportunity to make mistakes and get feedback. It is a form of tacit knowledge (as opposed to formal or explicit knowledge): it is knowledge that cannot effectively be transferred by means of communication. It is not necessarily linear, it may involve different shades, and it cannot be caught in simple rules. Educational programs, the design of organizations, work teams or jobs, and leadership may affect the extent to which professionals can actually develop and use their practical wisdom.

The book can be read as a complaint against modern society, in which practical wisdom does not seem to be valued anymore, and in which regulations, procedures, bureaucracy and control are used to compensate for that. A society that is based on distrust, uniformity, top-down management, easily quantifiable performance indicators, and a firm belief in the universal benefits of competition. A society that disregards individual initiative, responsibilities and capabilities of professionals. In that sense the book relates to the idea of the McDonaldization of society (Ritzer, 2011).

The book raises important questions about the design of academic curricula in technical communication. To what extent is it possible to make a start with the development of practical wisdom in the undergraduate and graduate programs? How would a curriculum that optimally supports the development of practical wisdom look like? How does practical wisdom relate to theories and academic research? I would argue that theories may provide useful windows to frame new experiences. At the same time, theoretical rigidity may severely narrow people’s experiences: If you only have a hammer, everything looks like a nail. The least an academic program can do is create awareness among students of the importance of practical wisdom, and a critical attitude towards the benefits of guidelines, procedures, checklists, and spreadsheets.

The book also raises questions about the design of jobs. Do we offer professionals sufficient opportunities to (further) develop their practical wisdom? Are professionals rewarded or punished when they try to use their practical wisdom? How can we persuade organizations to invest more in the development of employees and less in procedures and structural changes? And how can we find a
balance between using practical wisdom and quality assurance?

Finally the book calls for reflection on the nature of academic research, especially in those disciplines, like technical communication, whose reason to exist is based on their strong ties with the professional practice. In the social sciences and the humanities it seems to be an illusion that academic research one day will uncover the complete truth about a certain behavioral phenomenon. People change and contexts vary. It is also an illusion that academic research will lead to the optimal solutions of problems. When people are involved, many different strategies may be successful, and for each and every strategy there may be many flaws that undermine its effect. The real value of academic research, then, would be that it provides practitioners with rich new learning experiences or with perspectives that help them make sense of their past and future experiences. Research as a source of inspiration. That is what we are aiming for in Technical Communication.

Impact Factor and APEX Award
Let me briefly mention two recent signs of external recognition for the journal, which at the very least show that we are doing well. First, the new impact factors of the Web of Science have been published, and Technical Communication maintains its position as leading journal in the field of technical communication. An impact factor reflects the relationship between the number of references to articles in the journal and the number of articles published in a certain period. Regrettably, only three of the technical communication journals are included in the Web of Science, which is likely to have a negative effect on the impact factor of the journals included. The journal’s new impact factor is 1.027. It ranks 26th of the 72 communication journals included. It is a clear sign that publishing in Technical Communication matters.

Second, the special issue on Professionalization, guest edited by Nancy Coppola, has received an APEX Award of Excellence in the category “Magazine Series.” Congratulations, Nancy, and again thanks for the excellent work.

In This Issue
The first article in this issue is a new episode in the series of articles John Killoran has written about technical communication professionals and businesses. In this new article, he focuses on “About Us” information on the Web sites of technical communication contractors, consultants, and companies. Again he used a questionnaire and interviews as data collection methods. In the results he addresses, among other things, the issue of foregrounding a personal vs. a business profile. His study focuses professionals’ attention on the strategic aspects of their self-representation on a Web site, and outlines the various options.

In the second article, Julianne Newmark and July Dyke Ford describe a specific project in a Technical Communication major, in which students were made responsible for the production of an issue of an established ejournal. In addition to extensive information about the project and its place in the curriculum, Newmark and Dyke Ford also provide evaluation results of the course. As a matter of fact, a course like the one described may be an excellent opportunity for students to develop some practical wisdom at the university.

In the third article, Hanna Jochmann-Mannak, Leo Lentz, Theo Huibers, and Ted Sanders contribute to a relatively new line of research focusing on Web sites for children. Instead of focusing on the users’ perspective, they used a content analysis to reveal current practices of Web designers. In the results they distinguish between three types of Web sites for children, and outline current design conventions.

Finally, Ann Jennings describes the design and results of a study into practitioner-student interaction. She used a questionnaire among technical communication practitioners to investigate how they can benefit from various types of interaction with students. Just like the special project described by Newmark and Dyke Ford, these confrontations between academic programs and practice may result in promising opportunities to develop practical wisdom.

References
Is It “About Us”? Self-Representation of Technical Communication Consultants, Independent Contractors, and Companies on the Web

John B. Killoran

Abstract

**Purpose:** This article explores the purposes, character, and efficacy of “about us” information that technical communication contractors, consultants, and companies post on their business Web sites.

**Method:** The study surveyed an international sample of 240 independent technical communicators who maintain Web sites to market their services, and interviewed a subset of survey respondents.

**Results:** Overall, participants perceived their Web site's information about both their business and themselves to be somewhat useful in marketing their services, though they were also divided about which of these two types was the more useful. Regardless of whether their business comprised just themselves or a larger corporation with associates, some participants foregrounded their business’s identity to build credibility whereas others foregrounded their own and their associates' personal identities to build rapport.

**Conclusion:** “About us” information about a business and about its people can be usefully conceived as two distinct types of information, each deployed selectively to serve distinct purposes. Among the factors that may influence whether and how a technical communication business would foreground a corporate face or a personal face are not necessarily its corresponding corporate or personal status but instead the business’s industry, its location internationally, its size, and the qualifications and gender of its people.

**Keywords:** “about us” information, ethics, independent contractors and consultants, technical communication companies, self-representation, Web sites
Web Self-Representation of Technical Communicators

**Practitioner’s Takeaway**
- Most independent contractors, consultants, and companies find “about us” information posted on their business Web site to be at least somewhat useful in marketing their technical communication services.
- Independent practitioners are more than twice as likely to choose a Web address for their business based on their business’s name than on their personal name.
- Some solo independent practitioners perceive their solo status to lack credibility and accordingly try to represent themselves as a larger company.
- Other independent practitioners perceive that marketing technical communication services involves building rapport with prospective clients and accordingly post personal information about themselves and their associates.
- Posting personal photos can bring marketing advantages and disadvantages, with gender being a possible factor in whether and what to post.

**“About Us” Information**

Perhaps the most generic feature of a Web site, along with its home page and contact information, is information about the organization or individual behind the site—“about us” information. An “about us” search on Google results in over two billion hits, and of course many Web sites post such self-representational information under other labels, such as “history,” “profile,” “people,” “who we are,” and so forth (Isaksson & Jørgensen, 2010, p. 128-129). St. Amant (2005) and Nielsen (2008) have reasoned that posting such information can build an organization’s credibility. However, upon putting a diverse sample of organizational Web sites to the test, Nielsen found that Web users were not fully satisfied with the sites’ “about us” information, a result which suggests that composing such apparently self-evident information is not as straightforward at it might seem.

Whereas Web credibility guidelines typically advise users to examine the ownership, authorship, or sponsorship of Web sites, some empirical studies have reported that users tend to ignore such information (Flanagin & Metzger, 2000; Fogg et al., 2002; Fox & Raine, 2002). However, Warnick (2004, 2007) argued against generalizing from such findings because Web user behavior is field dependent. That is, users’ indifference to the identities behind one genre of Web site does not indicate a comparable indifference to the identities behind another genre of Web site. For instance, studies with college-educated job seekers have found them more disposed to pursuing employment with organizations that post more information—or at least certain kinds of information—about themselves and their employees on their Web site (Allen, Mahto, & Otondo, 2007; Walker, Feild, Giles, Armenakis, & Bernerth, 2009; Walker, Feild, Giles, Bernerth, & Short, 2011; Williamson, King, Lepak, & Sarma, 2010), suggesting that Web users are quite interested in the identities of companies and individuals with whom they might form an employment-related relationship.

Though technical communicators have no doubt composed some of the “about us” information posted on the Web sites of their employers and clients, they are rarely featured in such postings themselves. An important exception would be technical communicators who work as independent contractors, consultants, or principals of their own companies. Such independent practitioners represent a significant portion of the profession—about a quarter of STC’s membership, for instance (STC, 2004)—and many maintain Web sites to market their services (STC Consulting and Independent Contracting SIG, 2005b). Most technical communication services cannot be marketed through the kinds of quick anonymous transactions that typify e-commerce Web sites, for instance. Rather, building the independent practitioner-client relationship is not unlike building the employee-employer relationship, the kind of relationship sought by the participants in the studies cited above whose employment aspirations were influenced by the “about us” information on the sites of prospective employers.
As for technical communicators’ prospective clients, projects for which they would hire independent technical communicators frequently require those technical communicators to work closely with the clients’ subject matter experts and other stakeholders, perhaps on site, on projects that may last for months. With such personalized, long-lasting services, prospective clients would reasonably be interested in the identity of the technical communication contractor, consultant, or company with whom they might be sharing a close working relationship.

Among independent practitioners’ sources of new business, their Web sites, though useful, rank behind referrals and networking (STC Consulting and Independent Contracting SIG, 2005a, 2005b). Tellingly, both of these top sources rely in part on how independents present themselves, whether directly through networking or indirectly through referrals. Independents’ Web sites have been found to usefully complement these top marketing sources, and they do pull in some clients on their own as well (Killoran, 2010a). To the degree that a venue like a Web site can contribute to an independent’s marketing success, it may be in part because the Web site supplements, complements, or even substitutes for the personal presentation that makes referrals and networking so successful. For instance, a well-developed Web site could meaningfully complement the often-fleeting communication typical of a referral or a networking exchange by offering prospective clients more information about the independent technical communicator and his or her business.

Though presenting oneself might not be the main purpose of a business Web site—it is not, after all, a personal homepage—presenting oneself and one’s business could nevertheless play this helpful role in engaging prospective clients. It is this helpful role that motivates this study’s examination of how independent technical communicators represent themselves and their business on their Web sites.

This article first reviews previous research on web-based self-representation, in particular that done for business purposes. Then I detail the methods by which I surveyed 240 independent technical communicators about their business Web sites, and then interviewed many of these survey respondents. The results of these methods reveal the extent to which participants thought their representations of themselves and their business useful in marketing their technical communication services, and also reveal participants’ rationale for how they represented themselves or their business, or both. The article concludes by reviewing the different purposes served by foregrounding information about a business or about its people, and also the factors that influence whether an independent technical communicator might foreground one type of such “about us” information over the other.

Research on Web Self-Representation
Online self-representation—and in some cases its opposite, anonymity—has been studied most extensively in online personal and social venues such as personal homepages (Döring, 2002; Papacharissi, 2002), blogs (Qian & Scott, 2007; Trammell & Keshelashvili, 2005), social networking sites (Boyle & Johnson, 2010; Magnuson & Dundes, 2008), dating sites (Ellison, Heino, & Gibbs, 2006; Hancock & Toma, 2009), among others. Less commonly, it has been studied in online professional venues, in particular on the Web sites of individuals in highly visible fields, such as academics (Hess, 2002; Miller & Arnold, 2001) and politicians (Gulati, 2004; Stanyer, 2008). Apart from individuals, civic entities also have identities and accordingly their self-representations have been studied on the Web sites of cities (Grodach, 2009; Urban, 2002) and countries (Fürsich & Robins, 2002; Mohammed, 2004).

Companies likewise have identities, and the Web’s potential for propagating corporate self-representation was recognized in the early years of the medium’s development (Ritzenthaler & Ostroff, 1996; Teague, 1995). Since then, perhaps the main conclusion that can be drawn from research is that corporate self-representation is diverse.

In a study of the “about us” information on the Web sites of well-known corporations, Pollach (2005) found several kinds of topics that each appeared in a majority of her sample: company history; values, vision, mission, ethics codes; biographies of key members; corporate social responsibility; and a few other topics (p. 292). However, no topic appeared in more than 80% of her sample’s sites, and most appeared in much lower proportions, suggesting that genre conventions for “about us” sections remained rather fluid. Other studies have similarly found that companies vary in...
Web Self-Representation of Technical Communicators

the repertoire of approaches they adopt to represent themselves on their Web sites (Ahern-Connolly & Broadway, 2007; Isaksson & Jørgensen, 2010; Mara, 2008). Research has also examined cases in which organizations, because their Web sites are exposed to diverse and potentially conflicting organizational stakeholders, represent themselves in ways that are disputed or self-contradictory (Coupland & Brown, 2004; Sillince & Brown, 2009).

A comparable diversity can be seen in the online self-representations of business people. In a study of a web-based discussion forum about professional banking issues, Vaast (2007) found that participants varied widely in the degree to which they revealed or withheld details about their professional identities. Vaast interpreted this variety as evidence that participants “‘played’ with the way they presented themselves” (p. 344).

Collectively, such research offers little evidence of a self-representational genre or model guiding business organizations and business people in how they represent themselves on the Web. Rather, self-representational possibilities seem to be as diverse as the organizations and business people themselves, or as their rhetorical situations.

Organizational vs. Personal Self-Representations

Amidst such diverse self-representational possibilities, one dividing line implicitly drawn in some of the research literature distinguishes relatively impersonal representations of a business organization with relatively personal representations of the business’s people. For instance, Hunt (1996) favorably singled out one company site that featured profiles of its employees with links to their own personal homepages (p. 382-83), a strategy that he characterized as building the company’s “communal ethos,” in contrast with the more traditional conceptions of ethos isolated, in this case, in a company.

Pollach (2005) analyzed the somewhat more authoritative but comparable presence of corporate leaders represented through profiles and pictures on about two-thirds of the Web sites in her sample of well-known corporations. She reasoned that companies adopted this “humanizing” tactic with the understanding that “people can relate more easily to other human beings than to a faceless organization” (p. 294). She also observed that, on some sites, corporate leaders featured messages apparently in their own voice rather than the corporate voice, and she similarly reasoned that a message gains more credibility when coming from an identifiable individual than from an organization (p. 294).

In contrast with these personable corporate self-representations, Kimme Hea (2002) analyzed one corporation’s Web site self-representation that emphasized such impersonal corporate values as “specialization, mechanization, efficiency, and standardization” (p. 246), but minimized representations of the employees who did the corporation’s work and of customers and others who had been affected by that work. She argued that, through a process of “corporatization,” such corporate values had come to infuse Web representations even among non-corporate sites.

Whereas these three studies tended to favor personal representations of an organization’s people over impersonal representations of the organization, Coney and Steehouder (2000) recognized the benefits of both personable and impersonal approaches. They reasoned that credibility could arise both from an anonymity that would “underline the neutral, informational character of the Web site” (p. 331), or from an individuality that would “make the author persona more manifest, more personable, more memorable” (p. 332). Among their recommendations to develop a Web site’s persona were to post information about the organization and its key people (p. 332).

Though some of these studies position organizations and individuals at opposite ends of a representational spectrum, organizations and individuals perceiving the benefits of appearing like each other can, on the Web, appear to do so. Hybrid or disguised identities of various kinds—representations that cross racial, ethnic, or gender barriers, or that merge computers with humans—have long been a feature of the internet’s fertile identity experimentation, perhaps most popularly illustrated in the well-known 1993 New Yorker cartoon of a dog at a computer, saying, “On the Internet, nobody knows you’re a dog” (Steiner, 1993).

Writing before the Web developed, discourse analyst Norman Fairclough (1989) observed how organizations would craft their public communications so as to appear to speak one to one with members of the public, such as through personified advertising icons that have come to represent some otherwise-faceless
companies and brands. Fairclough dubbed this representational artifice synthetic personalization, a strategy by which an organization “simulates solidarity [through] a veil of equality” with members of the public (p. 195). Synthetic personalization can be seen in the way some organizations represent themselves on their Web sites. For instance, some corporations and cities have personified themselves linguistically and metaphorically in their Web sites’ writing (Koller, 2009). And some companies have used personified software agents, typically modeled to look female and attractive, to provide a winsome human-like face for their web-based customer service operations (Gustavsson, 2005; Gustavsson & Czarniawska, 2004; Zdenek, 2007). According to Gustavsson and Czarniawska, these “animated interface agents are assumed to have the ability to provide corporations with an identity…” (p. 654-55).

Adapting Fairclough’s synthetic personalization, Killoran (2002) proposed the analogous concept of synthetic institutionalization to refer to the reciprocal strategy of “individuals on the Web adopting the voices of institutions” (p. 24). He reasoned that individuals, unaccustomed to occupying a public position in a world-wide medium, might emulate institutions, which have a long experience representing themselves in public. Killoran observed synthetic institutionalization in the awkwardness by which individuals represented themselves on their personal homepages, in particular in how they branded themselves as faux commercial enterprises and described themselves as bureaucracies would.

Representing Independent Technical Communicators

At first glance, some of this research on the self-representation of large corporations in particular might not seem to apply to independent technical communicators, most of whom work solo or with a handful of associates in very small companies. An STC survey (2004) of its independent members found that more than two-thirds operated as sole proprietorships, indicating no legal distinction between themselves and their business entity and thereby perhaps simplifying how they might represent themselves and their business in their Web marketing communication.

However, the necessity to win clients can be the mother of some invention. For instance, writing in an online advice book authored and published by members of STC’s Consulting and Independent Contracting Special Interest Group, Elliott-Mace (n.d.) recommended that independents, in lieu of marketing their services under their own personal name, adopt a business name. In the same book, Glick-Smith (n.d.) offered independents the same advice as part of a general growth strategy of making their business “look bigger than it is.” In line with this strategy, she also advised independents to maintain a business Web site and to use the “royal we” to refer to themselves: “This gives the appearance that there is more than one person involved in the business.”

Such advice hints at how marketing self-representation, even among independent practitioners, can become ethically murky. Sole proprietors, even though they are not larger companies, might perceive advantages in representing themselves as such. Independents who successfully grew their company to be larger than themselves, with partners, associates, or employees, would need to weigh the relative advantages of foregrounding that larger company or its successful principal, or both. And all independents might weigh the potential advantages and disadvantages of sacrificing their privacy to put themselves out to the world.

To better understand how independent technical communicators deal with such situations, this study examines how they represented themselves and their business on their business Web sites, why they did so the way they did, and what outcomes they perceived coming from their representations.

Methods

This study of professional self-representation is part of a larger research project examining several facets of the Web sites of independent contractors, consultants, and companies offering technical communication services. Many details of this research project’s methods have been published previously (Killoran, 2009, 2010a, 2010b, 2011) and so here I summarize those and elaborate in particular on the methods that pertain distinctly to the issue of self-representation. These methods, in brief, involve a survey of practitioners who maintain business Web sites to market their own or their company’s technical communication services, follow-up
Web Self-Representation of Technical Communicators

interviews with a subset of the survey respondents, and an examination of each site for the names of the business and of its key practitioner(s).

**Sampling and Recruitment**

To gather a sample pool of independent technical communicators’ business Web sites, a variety of sources was used, with search engines producing the majority of the pool and links from professionally relevant sites producing a significant minority. (See Killoran, 2009, 2010a, 2010b, for more details of this sampling process). Of note, searches of LinkedIn—now arguably the leading online venue for professional self-representation—did not contribute any links to independent technical communicators’ business Web sites at the time this pool was being gathered throughout the winter and spring of 2007, which was before LinkedIn became so widely popular.

This sample pool included over one thousand sites, mainly from the U.S. but also from countries around the world, each at least partly in English. Each site was examined for evidence that it was still being maintained, and sites that showed no evidence of activity in the previous year or so were removed from the pool, leaving a sample of 638 maintained sites. (See Killoran (2009) for details about this winnowing process.) Each site was also examined for its e-mail contact and for the name of the business and of its principal, partners, or other key members. These names were used in part to compile an index of the sample’s most basic self-representational information: business and personal names.

Prospective participants behind these 638 were each sent a recruitment e-mail opening with an address line naming the business, when such a name was available, and then the principal or a partner when one of their names was known. These names were featured with the expectation that recruitment e-mails to companies with more than one member would be directed to the named principal or partner, and that personally addressed e-mails would more likely elicit a response. Non-respondents received two follow-up e-mails, occasionally directed to another partner when such an alternative name or e-mail address was available. The recruitment e-mails included an informed consent notice and linked to an online survey questionnaire. A total of 240 respondents—150 based in the US and 90 based in 14 other countries—submitted completed questionnaires.

Also received were 6 unusable questionnaires and sets of bounced (undeliverable) e-mails to 17 sites, resulting in an overall response rate of 39.6%. This can be considered a reasonable rate when compared with lower response rates typically achieved in surveys of technical communicators (e.g., Dayton & Hopper, 2010; STC, 2004; STC Consulting and Independent Contracting SIG, 2005a).

**Survey Questions**

Of the survey’s nine questions, one multi-part question pertained directly to self-representation. This question asked respondents to rate the marketing contribution of several features of their business Web site, and was introduced as follows:

Listed below are some kinds of information featured on the business sites of many technical communication companies, consultants, and independent contractors. For those kinds of information featured on your site, how much has such information helped you market your technical communication services? (For information not featured on your site, answer “Not applicable”)

The first two features listed pertain to self-representation:

- “Information about your business organization (examples: business name, organizational history)”
- “Information about you and other partners or employees”

Each feature was accompanied by a numerical response scale ranging from 0, defined as “[helped] not at all,” to 3, defined as “[helped] a lot,” with two additional response options denoted “don’t know” and “not applicable.”

**Interviews**

The survey concluded by asking respondents if they would be willing to participate in a brief follow-up e-mail interview and approximately half went on to submit interview responses. To retain participation and to elicit optimally informative responses, questions
were limited to a handful per participant, and so questions about self-representation were asked only when warranted by a participant’s survey responses or by evidence from the participant’s Web site—which had been downloaded and examined so as to prepare for the interview.

Typically, participants whose sites did not appear fully transparent about whether the business represented just the participant alone or other associates as well—such as through the ambiguous use of “we”—were asked to clarify that matter and, more generally, why they had represented the business in that way. Similarly, participants whose sites seemed markedly personal or impersonal—such as sole proprietorships referring to their principal grammatically in the third person only—were frequently asked about how personal or impersonal they decided to be on their site. In some cases, the presence or absence of a specific self-representational feature would elicit a question about that feature. For instance, a Web site featuring one or more photographs showing the participant or other associates or even family members might elicit a question about the reason for posting the personal photograph(s), especially in cases in which the photograph(s) showed a non-business appearance or setting. Or a Web site that featured the participant with little or no business identity, such as no business name, might elicit a question about why the participant opted to represent their business as an individual rather than as a company.

Results

Quantitative Results
An initial indication of the relative prominence of organizational and personal self-representational information can be gleaned from the presence of business and personal names among the sample’s 240 Web sites and their Web domains. As shown in table 1, roughly similar large majorities of sites mentioned the name of the business (a total of 201, or 84%) and the full name of at least one of its principals (192, or 80%). However, over a fifth of those business names (43) were derived from the name of the principal, in such forms as “[Surname] and Associates” that would inherently highlight the central role of the principal to the business enterprise. All sites mentioned at least one of these two kinds of names, but more than a third of sites (a total of 87) mentioned only one, an indication that these sites might have been foregrounding one type of self-representation over the other. All businesses, of course, must have practitioners, but not all practitioners must have a business name, so the 16% of sites that omitted to mention a business name likely did not have a business name to omit but may have conveyed other “about us” information about the business, such as its history. By contrast, the 20% of sites that omitted to mention their principal’s full name must have been concealing their practitioners to some extent, concealing them behind their business’s identity.

Table 1: Presence of Business and Personal Names on the Web Sites and in the Web Domains of Survey Respondents

<table>
<thead>
<tr>
<th>Type of name*</th>
<th>Location of name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Web site (%)</td>
</tr>
<tr>
<td>Business only</td>
<td>48 (20%)</td>
</tr>
<tr>
<td>Personal only</td>
<td>39 (16%)</td>
</tr>
<tr>
<td>Both business and personal</td>
<td>153 (64%)</td>
</tr>
<tr>
<td>Neither</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Total</td>
<td>240 (100%)</td>
</tr>
</tbody>
</table>

* The two types of names are the business’s name and a personal name, which was operationally defined as the full name of at least one of its principals. Three Web sites that featured a business name and a principal’s first name only are grouped within the “business only” category.

b The Web domain includes only that portion of the Web address, or URL, before any directories or file name, such as www.[my business].com. Because this portion is typically short, it is unlikely that domains would accommodate both a business name and a personal name, and so the “both” category was eliminated. Cases in which businesses named after their principal also had a Web domain rooted at least partly in the name of their principal are grouped within the “personal only” category.

c Ten sites used the domain of their Internet service provider or a Web hosting company, and so were not included in this analysis of freely-chosen domain names.

All but ten sites of the sample were addressed with their own Web domains (e.g., www.[my business].com), as distinct from using a subdirectory of the Web domain
Web Self-Representation of Technical Communicators

of their Internet service provider or a Web hosting company, indicating that their owners had some choice over how to address their site. Of these, only 60 (26%) Web domains were rooted at least partly in the name of the principal, whereas 153 (67%) were rooted in the non-personal name of the business; a small number (17, or 7%) featured no apparent resemblance to either the business’s or the principal’s name. In contrast with the relatively balanced mentions of business and personal names on the Web sites proper, this marked imbalance in the Web domains—which Web site visitors would typically encounter before they arrive at the site by typing in the URL or clicking on a hyperlink—suggests that the business identities of these sites initially tended to take precedence over the personal identities of the technical communicators.

Almost no significant differences were found in the proportions of business or personal names between the Web sites or domains of participants based within the U.S. and those of participants based beyond the U.S. The one exception: a principal’s personal name is more likely to appear on the Web sites of participants based in the U.S. (84%) than on the sites of their overseas peers (73%; \( z = 2.00, p = 0.045 \)). However, the international portion of the sample was dominated by participants based in English-speaking countries that are culturally akin to the U.S., especially Canada, Britain, and Australia, whereas the smaller numbers of participants from the sample’s scattering of other countries and continents did not provide a meaningfully coherent or robust sample population on which to base a comparison.

Survey results show that, overall, participants rated the helpfulness of the two types of self-representational information—about their business organization and about themselves and any partners or employees—very similarly. As shown in table 2, most participants reported that each type of information was at least partially helpful in marketing their technical communication services, with typically between 20%-30% of respondents rating either type of information as helping a lot, moderately, or a little. By contrast, fewer than 10% rated either type as helping not at all, and similarly low percentages indicated that either type was “not applicable.” Survey ratings from participants based within the U.S. and participants based beyond the U.S. showed no significant differences.

<table>
<thead>
<tr>
<th>Extent of marketing helpfulness</th>
<th>Web site information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organizational(^a)</td>
<td>Personal(^a)</td>
</tr>
<tr>
<td>3 – A lot</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>2 – Moderately</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>1 – A little</td>
<td>25</td>
<td>21</td>
</tr>
<tr>
<td>0 – Not at all</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Don’t know</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>N/A (Not applicable)</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

\(^a\) The questionnaire identified organizational Web site information as “Information about [the participant’s] business organization (examples: business name, organizational history)” and personal Web site information as “Information about [the participant] and other partners or employees.”

At first glance, such responses suggest that rather little distinguishes the perceived efficacy of these two types of self-representational information. However, a closer examination of the data shows that a slight majority of respondents (130 of the 240, or 54%) rated the helpfulness of these two differently, suggesting that, in the experiences of individual participants, the efficacy of these two types of information are not as indistinguishable as the overall data would suggest.

Representing Technical Communication Businesses

We can better understand participants’ distinct experiences with, and attitudes toward, information posted about their business organization and about themselves and any partners or employees by examining participants’ interview responses, in particular responses that suggest why participants foregrounded one type over the other.

Among participants who foregrounded their business’s identity over their personal identity, the few specializing in security-sensitive industries did not necessarily have a choice. For instance, one participant,
the Director of Sales and Marketing for a large technical documentation company that served the transportation, aviation, military, and other sectors, explained why their site made no reference at all to any members of their company, to the extent that their 300+ word “about us” page frequently referred to the company as “it” rather than “we”:

Never, I repeat never publish or release a name especially on the internet war zone. It opens Pandora’s box for scam, spam and the potential harvesting of names for employment poaching. It’s a major breach of company security, especially for those involved with government or military work.

This participant further justified his wary view of Web self-representation by depicting the technical communication field as being as depersonalized as his company’s Web site:

[Technical communication] is a cold and very, very impersonal industry. The client gives us data, words and pictures. We then turn the source data into pretty easy to read, accurate and compliant documents. We ship the goods, send them the bill and they pay ... Ka-ching! There is little or no face to face personal relationships in this business. I’d prefer it not so, but this is the new world order and we’ve somehow figured out how to extract the human element. It’s all about bottom line numbers, nothing more, nothing less. It’s not our parents’ world any longer, to our detriment!

This view of the field as impersonal, though not expressed so explicitly by other participants, perhaps underlies their more commonly expressed view that the personal is not marketable. In particular, several participants who worked solo perceived their Web site’s corporate façade as an antidote to an apparent stigma associated with solo freelancers. For instance, one participant, whose name appeared only in a “contact” line at the bottoms of his various Web page displays, explained why his site gave more emphasis to his business’s name:

I had decided to be as impersonal as possible on my web site because I wanted to emphasize that [my business] would be functioning in a service-driven vendor role and not in the role of substitute employee (two distinct roles easily blurred by large firms that often hire large numbers of consultants/contractors).

In several cases like this one, though the individual and the company were in effect one and the same, the means by which they were represented could make them appear quite different. On the sites of several participants who worked solo, that solo status remained ambiguous, often disguised behind the business’s name and identity or vague pronouns. For instance, the site of one such participant referred to her company as “we” and “us” though the only person identified was the participant herself, introduced as the founder and “managing director” of her company and referred to throughout by her name rather than “I.” She explained:

I did this when I started out to avoid having the “solo operator” image, primarily because I thought I might have to troll for new business. For the same reason, I selected the Managing Director title rather than President or Owner (it also has a more global connotation). Now, it allows me to keep my options open in case I decide to hire an editor or copywriter.

The site of another such participant similarly referred to his company as “us” and “our” but featured only him, introduced as “senior writer” with an accompanying passport-sized photo. He explained the apparent incongruity:

Think of the website as referring to a “royal we”. I wanted to promote a friendly but professional image. By referring to us I hoped to convey the idea that [my company] can pursue any project, big or small. In addition, I could foresee situations where I would include other freelancers, as required, on individual projects.

The site of yet another such participant similarly referred to her company as “we” and “us” though the only person identified was the participant herself, introduced as the company’s owner and referred to throughout by her name rather than “I.” She described the process by which she decided how to present herself and her company:
I struggled with this decision because I prefer to work alone and don’t plan to sub-contract any work. At the same time, I wanted to accommodate the option of sub-contracting or working in partnership with a graphic designer or software developer on projects that require advanced skills in those areas. I looked at many writer Web sites and took note of advice on this subject from freelancing colleagues who participate in group e-mail lists that I belong to. I took part in a conference call on designing a Web site for your freelance business that was offered through a special interest group of the Society for Technical Communication, and we discussed this topic in detail. I concluded that most writers present themselves as part of a team even if the team is virtual. I think the concept of a virtual team is acceptable and maybe even comforting to potential clients.

Though, in signaling the “royal we” and “virtual team,” these and some other solo participants may have at least aspired to a potential “authentic we” or “real-life team,” some other solo participants who adopted similar tactics didn’t mention such aspirations. Rather, representing a business as a solo operation “doesn’t sound professional,” in the words of one participant. By contrast, representing a solo operation as a larger company “would ‘sound more grown-up’,” according to another participant, with plural pronouns making it “sound and look like [the company has] huge offices etc.,” according to yet another, “rather like an advertising agency or any other type of communications company,” according to yet another. These explanations suggest that the royal we or virtual team serves a strategic purpose of disguising a solo consultant or contractor behind the mask of a larger corporate identity.

It might be assumed that technical communication companies with more than one practitioner would be immune from such concerns, but some were nevertheless concerned to portray an appropriate corporate identity rather than a collection of individuals’ identities. One participant, co-founder of a technical communication staffing company with a few dozen associates, maintained a Web site in which her and her partner’s names appeared only in an accompanying feature article scanned from their local newspaper, not at all in their own Web site’s text. Even a page profiling the company referred to the unnamed co-founders only by their job titles. She explained her company’s relatively anonymous approach as, in part, a reaction to someone’s recent criticism that a previous version of their site had been “too folksy”; “We’re now in the process of changing it little by little to a more corporate look with general pictures instead of pictures of the actual employees.” At the time of this study, their site included four photos that appeared to be generic stock photos of people in workplace settings or doing workplace activities. The only authentic-looking photos appeared to be two other photos of the outer facades of their two office buildings.

Of note, in their survey responses, eight of the ten participants who are quoted above rated information they posted about their business organization as equally or more helpful in marketing their technical communication services than (the limited) information about themselves; the other two participants did not know.

**Representing Individual Technical Communicators**

In contrast with this strategy of withdrawing behind one’s business identity, many participants maintained sites that represented themselves and their colleagues quite openly, in some cases as the main selling point of the business. One participant who, like the participants described above, had represented herself as a larger company, explained why she revised her site to include news about the family pet on the homepage and a blog that shared her business experience:

> I’ve just updated my web site after a lull - and added some more personal information. I’ve also made it about “me” rather than “us.” I used to present my business as a larger company. But really, it’s just me, and I want clients to know that, so I’ve put more “personality” into it ... I’m building my business as a speaker, and people really like to know a bit more about me for that. So far, I’ve gotten good response from my site and the more personal approach.

Among the minority of participants who maintained their business or Web domain under their personal name rather than a non-personal business name, some explained this choice by saying that it more accurately represented to clients the solo independent contractor
or consultant and his or her personal qualifications, that they were personally well known in their field, or, in the words of one participant who operated without a business name, that “it’s easier to cash the checks.”

Some participants, including those who maintained their business or Web domain under a non-personal business name, posted profiles of themselves and their associates because they had exceptional and hence marketable qualifications. For instance, the “about us” page of one partnership featured a half-dozen short paragraphs about the two partners, mentioning among other things their academic degrees, and linking to one partner’s 3000-word resume. This partner explained the impact of the academic degrees in particular:

[W]e are impressed with how many prospects mention the journalism and engineering undergraduate degrees as making a difference to them... We have had clients tell us that locating another engineer with writing experience is difficult, though there are many English / technical writing graduates advertising.

Academic qualifications and accomplishments such as research publications seemed particularly important for participants marketing scientific and medical writing services, and on some such sites, the business principals and associates were each the subject of profiles hundreds of words long.

In contrast with the participant quoted in the previous section who depicted the technical communication field as being cold and impersonal, other participants depicted the field—or at least their site’s marketing strategy within it—as relying on personal connections, and accordingly foregrounded their personal identity in order to initiate a rapport with prospective clients. A participant whose business site featured a page-long profile of herself—including a photo, a page devoted to her photography interests, and links to her blog, her resume, and her personal site—offered her rationale for highlighting herself:

When employing a freelancer, I feel that a personal connection – the sense that one is employing a real person who will be dedicated to one’s interests – is important. So, the personal touches help to establish that connection. I have tried another site where my business was presented as a faceless corporation – with little success. That may partly have been because of the service offered, but I have a feeling that to succeed as a big business, one has to have the reputation and recognition to match. The general response has been positive – “nice to know I am dealing with a real person”, etc. No-one has commented adversely, to date.

Similarly, another participant whose site featured paragraph-long profiles of herself and of more than half a dozen contractors she employed, and who maintained a professional-oriented blog, explained the marketing role of her personal presence:

People hire me because of my reputation. Having said that, my reputation is enhanced and reinforced because people can read my thoughts (on my blog) and feel that they know my philosophy and my strategic approach ... When people contact me, they generally open the conversation with, “... I’ve already had a look at your site, and ...” so they are obviously using my site as a method of getting to know me … When shopping around for a consultant, you want to get an idea of their personality, and this allows a person to read what a consultant has written and understand their perspective, and decide whether it would be a good fit to work with them.

Some participants were adamant about foregrounding themselves on their business site, even if doing so might foreclose rather than build relationships with prospective clients who expected a more business-like demeanor. Consider how three such participants justified their conspicuous personal presence while dismissing its potentially negative marketing consequences.

The site of one participant briefly introduced her on the homepage before introducing her technical communication services, and featured a montage of personal photos repeated atop every page, some showing her in business settings but a couple showing sporting scenes. Throughout, the site spoke in the first-person, with about half the sentences featuring the word “I.” She explained her personal prominence:
I figure that "I" am what I’m selling: my experience, my preferences, my contacts, my ability to get your job done the way you want it. There are lots of stick-in-the-mud clients who will be turned off by the personal nature of my web site, and that’s fine with me … I’m in the very fortunate position of being spoiled for choice and I’d rather let my web site sift out the clients who are likely not a good fit for me anyway.

Another such participant’s site included several light-hearted features: a page-long tongue-in-check personal profile that included a photo of the participant and another of his children, a page featuring many technical writing gaffes, and a page of cartoons he drew himself. He reported that, when meeting prospective clients, these light-hearted features “are often what we talk about before settling down to business.” He also explained the general un-corporate tone of his site:

I don’t put on any airs and graces and pretend to be a multinational. It’s just me and my ageing Dell computers. I think clients appreciate the honesty - well, the ones that contact me! If a client is more interested in a glossy website and company image then they’re not the sort of client I want anyway.

Yet another participant, the sample’s most prolific blogger, included a blog link in her business site’s navigation bar and, on her main blog page itself, introduced her several blogs with an apologia notifying prospective clients that her blogs are personal, not professional. She defended their presence on her business site:

Most of the time, people hire me based on my personality, and my blog reflects that … If someone is thinking about hiring me and decides not to, based on things I’ve said in my blog, then I doubt very much that we would have worked well together anyway.

Each of these three suggested that their conspicuous personal presence served the additional purpose of letting them choose their clients, rather than the reverse, by preemptively weeding out clients who would be put off by such self-presentation. In their survey responses, these three and the other four participants whose cases are explored in this section rated such personal information as equally or (usually) more helpful in marketing their technical communication services than information about their business organization.

Representing Technical Communicators Within Companies
Whereas most of the participants quoted above worked solo, some participants who ran companies with partners or associates also had reasons for representing on their site not just their company but also themselves and their people. One participant maintained a high volume business employing more than a half-dozen writers in part by relying extensively on search engine marketing, including advertising using Google Adwords. On the one hand, she valued her site’s success in representing her company’s relatively large size—and also indirectly echoed the stigma, discussed above, associated with solo independents: “I think we do a good job of online positioning—we don’t look like a freelance shop or smaller contractor … I think we do a good job of distinguishing ourselves from the smaller firms … ” On the other hand, her site also included brief profiles of herself and each of her writers. She pointed out how her prospective clients—many of whom would know of her business only through a search page link—“can see from the breadth of [our work] and our team, whose bios are online, that we are ‘for real’.”

As with the solo participants discussed above, some participants running companies with partners or associates also sought to build a personal rapport with their audiences and accordingly foregrounded personal representations to break through the conventional, impersonal corporate representations. This was the rationale behind the corporate blog of one participant, the co-director of a partnership:

[O]ur blog helps us to add a personal touch to our site. Web sites can seem very impersonal and make it difficult for individuals to know who is behind the company. I have had people comment on a particular posting in person or via e-mail. So, it’s just a good way to see a human side to the Web.

One of the sample’s largest companies posted extensive biographies of each of its two dozen members, typically a page long and usually extending beyond just
their professional background and accomplishments into their personal lives, such as their family and personal pursuits. Parts of the company's site also spoke with a casual, even jocular, tone, such as where it presented the company's mission—typically a serious matter—with humor. The company president explained the rationale for his site's distinctive un-corporate voice:

We include the personal parts because our "product" is "us." I believe that customer satisfaction and customer loyalty in our business are built around developing and maintaining business relationships. One way to start that is to give prospects and customers as good a look at us as we can. I wish we had more of this on the site. We include the humorous parts because we have a sense of humor. Many of our clients also have a sense of humor and like that aspect of our site. I'm guessing that some clients or prospects could be put off by it, but nobody has given us that feedback ... We really have two "customers" for the site: clients and recruits. That is, our site is just as important to us to attract new writers as it is to attract new customers. This duality also explains some of the informal, personal, humorous aspects of the site. We want writers who are "like us" in terms of aptitude, ambition, attitude, knowledge and skill. We think that the best way to attract them is to tell as much about ourselves as is fit to print.

The Web site of another of the sample's largest companies included photos identifying more than half a dozen of their management-level employees, each dressed casually in outdoor settings, and used an affectionate-sounding nickname to refer collectively to the company's employees. The homepage also prominently featured links to the company's community and charity initiatives and to a recreational employee event, the latter of which led to a lengthy page detailing the event. The company owner explained her philosophy for these distinctively non-corporate elements of her site:

The informal tone of our website reflects our corporate culture; we believe you can be serious about work while having fun. We want clients, both prospective and current, to know that we are approachable, and we think our website shows that. Personally, I'm turned off by websites and other corporate communications that are ultra-formal; I think the effect is off-putting and unfriendly. In our industry it is particularly important to be approachable. [Our company] has received very little negative feedback about our informal tone, both on the website and more generally, and many clients have even adopted some of our informalities ... We've had at least three clients say they feel better about our future together, working with us, etc. because after viewing our website, it appears our core values are closely aligned. We've also had probably a dozen prospective employees contact us because of our website saying we look like a company for whom they want to work because of the corporate culture represented. Probably a half dozen of them turned into employees over time. Giving back and holding fun events ... are important aspects of our corporate culture, and so it's logical that information about them would be displayed prominently on our homepage—there have even been instances when long-standing clients have participated in some of our fun or volunteer events.

In their survey responses, all four of the participants quoted in this section who ran companies with partners or employing associates rated information they posted about themselves and their people as equally or more helpful in marketing their technical communication services than information about their company.

**Personal Photographs**

Some participants' Web sites featured not just verbal but also visual self-representational information: photographs of themselves, their buildings, partners, employees, and even their families, as well as the rare video. Readily available and easy to post on a Web site, these raise self-representational issues beyond just those that arise from verbal discourse and hence deserve attention in their own right.

Along with sharing the same marketing advantages of personal information delivered in verbal form, personal photographs also bring other marketing advantages, according to the interview responses of some participants:
They better enable a prospective client to establish reassurance and rapport with a technical communicator they have not yet met by literally putting a face on an otherwise anonymous consultant or contractor;

- They enable a contact to recognize the technical communicator at a first face-to-face meeting;
- They help a contact remember the technical communicator they have met previously.

The Web site of one participant included three personal photos, one of which, oddly, was a shot of her in a kayak taken at such a distance that she was not readily recognizable. She explained that she was applying a marketing lesson—

to … troll for clients that have similar interests as you (hence the kayaking photo) ... Interestingly, I’ve found that prospective clients will make conversation about what they read/saw in pictures on my website. So the personal info turns into [a] kind of conversation starter.

She added that, in her experience, prospective clients usually better remembered information about her than about her business services.

Despite such apparent marketing advantages, posting photos also raised concerns beyond just the obvious loss of privacy that accompanies personal information posted in verbal form. Visual representations can be more potent than verbal representations, creating visceral impressions that can strongly enhance one’s marketing efforts but also strongly detract from them. Such impressions were a reason offered by one participant for why his site featured no information at all about himself—not even his given name, let alone a photo—beyond vague references to “we” and “our”:

I was put off by other websites with an ‘about us’ section with photos of a couple of twits in suits: to me, these look silly. Unless you’re prepared to spend money on good photography (which I’m not), website photos of consultants tend to look like the villains from B-grade movies.

The impact of such visceral impressions might vary depending on whether the subject of the photos is male or female. For instance, two male participants expressed no reservations of their own or negative feedback from others about the casual photo each had posted of himself on his site, photos showing each bearded man in a non-business setting wearing non-business attire. One posted a photo of himself in dark glasses, casually dressed in jeans outside with his dog, accompanied by a brief professional profile with a link to his multi-page resume but also accompanied by links to lists expressing personal interests unrelated to his business. He explained:

I’ve felt that it is valuable to represent a certain portion of my personality as part of my business identity. With respect to the picture of me and [my dog], it’s a picture that I felt represents my character well. As an aside, I’m not to be found in a business suit. I’m allergic to them, so to speak …

The other posted on his “about” page an outdoor photo of himself in a tee-shirt, accompanied by a page-long personal profile and a link to a separate section of his site devoted to his personal writing. He explained:

The informality is pretty carefully constructed to convey a specific message: I’m not uptight. I want people to come away with the idea that I’m very good at what I do, and I’ll treat their work very professionally, but that when they call I probably won’t be wearing a suit and tie. [The site] has gotten praise from clients who have looked at it.

By contrast, a female participant whose site design, atop every page, featured a close-up photo of an attractive young woman in business attire indicated that what appeared to be a stock photo was indeed not of her: “I don’t put my own ugly mug on the home page,” she explained. “I am female, marketing to men.”

However, another female participant, who ran her business with her male partner (both business partner and life partner), featured on her “about” page five close-up photos of herself smiling engagingly, plus lots of writing not only about her professional accomplishments but about her hobbies; her partner’s “about” page was similar. She explained,
Most people find it refreshing to see we have personalities and to see what we look like … We actually get compliments from long distance clients about knowing that we look normal, and it helps to be attractive. I’m not above using my exceptional good looks to sell my writing and editing services. Visuals are important …

Unusually, their business site featured not only the his-and-hers “about” pages but a separate page featuring photos of their children with write ups about their interests and hobbies. But this children’s page was accessible only through a link from his “about” page, not hers—deliberately so, she explained:

I’ve only had one person tell me in over 15 years of having a corporate website that they thought having our kids on the site was inappropriate … Since [my partner’s site] isn’t used as a selling point as often as [my own site], I removed the kids from my [“about”] file and it is only on [his “about” file].

A family photo also appeared directly beneath the kayaking photo of the participant introduced above, showing her holding her young son, and here too gender was a factor in her decision to post such a photo:

Since moving to a rural area, I found that a handful of people out here think that as a married woman I’m just working to get out of the house from time to time. (Yikes! I know - some people still think that!) My usual reply to this kind of comment is that I’m working to support my family - which is why I initially posted that photo with my son.

Of note, in their survey responses, both of these female participants who posted several personal and family photos rated information about themselves (and, for one, her partner) as helping a lot to market their technical communication services. As for the two males posting casual photos, one rated information about himself as helping a little and the other did not know. Though their accounts are anecdotal, they suggest that female independent practitioners might have to be more strategic than their male colleagues in choosing whether and how to represent themselves visually.

Discussion

Examining one of the most generic parts of a Web site, this study contrasted independent technical communicators’ experiences with, and attitudes toward, two types of “about us” information on their business sites: about their business and about themselves and their associates. Most businesses post both at least to some degree, such as, minimally, a business name and the personal name of its principal. Notably, however, about one-fifth of sites in this study withheld even the name of their principal, a conspicuous anonymity. Such personal discretion was also evident in their Web addresses, of which more than twice as many were rooted in non-personal business names than in personal names. Names on Web sites and in Web addresses, if they reliably signal the character of Web sites’ “about us” information, would suggest that the business sites of independent technical communicators tend to foreground their business identities over their personal identities.

Yet results of the survey questions revealed that, in general, both types of “about us” information were at least somewhat helpful in marketing independent technical communicators’ services, and roughly to the same extent. Despite such an apparent lack of differentiation between the two, a slight majority of participants responded differently to these two similar survey questions, indicating that many independent technical communicators experience these two types of “about us” information as indeed different, though their own experience of the relative efficacy of each type differs from that of some of their peers.

Independent technical communicators’ rationale for presenting, or withholding, information about their business or themselves reveals that the two types of “about us” information seem to serve different purposes. Some participants withheld even basic personal information for legitimate security reasons. The absence may not have been perceived as a loss among those who viewed the technical communication field as relatively impersonal anyways, as the absence would not be perceived to sacrifice much if any marketing advantage.

By contrast, other participants foregrounded personal information because they perceived it to be marketable, whether because it highlighted their marketable qualifications and accomplishments or because it built some personal rapport with prospective
clients. Implicit in this latter purpose—and explicit in the explanations of some participants—is a view of the technical communication field as built on close working relationships, a direct contrast with the impersonal view of the field evinced by some who withheld their personal information. Some participants seemed to indulge in their personal interests and self-expression seemingly not just because of their business but perhaps even in spite of their business. In their interview responses, they expressed skepticism about working with prospective clients who would otherwise have passed them over because of such personal representations, and thereby tacitly reinforced the view of the field as built close working relationships.

The study also revealed some evidence of synthetic personalization (Fairclough, 1989) and synthetic institutionalization (Killoran, 2002), in which, respectively, larger companies on the one hand and solo independents on the other represented themselves somewhat like each other. In the case of the synthetic personalization, the personalizing efforts of some of the larger technical communication companies would more justly be described as authentic than as “synthetic”—that term better applies to fields that market commodified products or services, whereas even large technical communication companies are relatively small and technical communication services are necessarily distinct to each client and project. But some larger companies nevertheless perceived that winning clients relies not just on representing their size and their corporate identity but also cultivating personal rapport by representing their company’s people.

As for synthetic institutionalization, the representational efforts of some solo independents to disguise their solo status behind the façade of a larger company appear to justly warrant the adjective “synthetic.” Indeed, such efforts appear to breach standards of ethical professional practice. According to STC’s statement of ethical principles, technical communicators “provide truthful and accurate communications…. We alert our clients and employers when we believe that material is ambiguous…. When we advertise our services, we do so truthfully” (STC 1998). Though some solo independents declared their pretense of a corporate-sized entity by growing into it, they and some of their solo peers nevertheless tended to perceive a corporate-sized entity to be more credible and hence more marketable than a solo operation and so represented themselves accordingly, regardless of ambiguities, inaccuracies, or untruths.

It is the nature of the technical communication field that its practitioners are liable to find themselves in a variety of ethical quandaries (see Dombrowski (2000, 2007) for reviews of the literature documenting many such cases). In this study and in STC’s statement of ethical principles, the onus has been on the individual practitioner. However, Dombrowski (2007) has argued how ethical decisions are shaped not just by individuals but also by elements in the broader social context. In this case, such elements could include conventions of marketing genres and also the apparent attitudes of the audiences of such genres, prospective clients. Before passing judgment, a more thorough exploration of synthetic institutionalization in solo independents’ marketing could consider how ambiguity permeates marketing communication genres—technical communicators are not the first to use the “royal we”—and inquire into the actual attitudes of clients toward the independent technical communicators with whom they contract.

Such swopping between corporate and personal representations, together with the mixed results from the survey, interviews, and Web site analyses, indicate that there may be no definitive answer to the question of whether a technical communication business should favor an organizational face or a personal face or a particular combination of both. Though this study did reveal marketing advantages with each type of “about us” information, these advantages would not necessarily be available to any given technical communication business because many advantages appear to be associated with factors that differ from business to business: the security-sensitive nature of the business’s industry, the business’s size, the business’s general marketing strategy beyond the Web site, the kind of practitioner-client rapport and working relationship that the business seeks, a technical communicator’s qualifications, their gender, even, alas, their physical attractiveness.

For instance, because technical communication businesses are populated with a variable mix of owners, principals, partners, associates, employees, staff, subcontractors, and even spouses—some only occasional and some doing work far removed from technical communication—this study did not inquire in depth into the demographic background of participants and their business. After all, what is the size of a company
with a flux of full-time and occasional associates, and what is the gender of a male-female partnership? However, some evidence points to demographic factors influencing self-representation, such as the size of the business, with single-person operations being perceived by some as too insubstantial to risk personal representation. Another such demographic factor is the gender of the technical communicators, which seemed to influence how some represented themselves visually.

Yet other factors addressed only partly or not at all in this study could influence how technical communication businesses represent themselves online, such as their national culture, and the growth of alternative online venues of professional self-representation such as social networking sites. In the case of a business's national culture, this study did find a greater tendency to display a principal's personal name on Web sites based in the U.S. than on those based elsewhere. However, other potentially more significant cultural influences could not be adequately explored with a sample dominated by participants based mainly in the U.S. and kindred countries. As for social networking sites, at the time this study was conducted, searches of the then-nascent LinkedIn turned up no outbound links to the business sites of independent technical communicators. Since then, it’s possible that the convenience and validation that LinkedIn and other social networking sites have provided to online self-representation and self-marketing may be influencing how independent technical communicators represent themselves and their businesses. To accommodate the diversity of technical communication businesses, these kinds of factors, as well as other nuances that make each self-representation unique, deserve to be further explored, especially with qualitative research methodologies which can better accommodate such distinctiveness.

References


Web Self-Representation of Technical Communicators


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**About the Author**

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An Academic Ejournal As Technical Communication Client Project: Enculturation, Production, and Assessment
Julianne Newmark & Julie Dyke Ford

Abstract

**Purpose:** This article focuses on the integration of a specific client project, the production of an issue of an established ejournal, into the Technical Communication major at New Mexico Tech. Students experienced a “workplace context” within their university classroom (replete with timeline challenges, requisite managerial decisions, and assignment delegation).

**Methods:** Students’ performance on required course documentation and ability to satisfactorily complete course goals were examined, and exit interviews were conducted and analyzed through the lens of theoretical frameworks offered by Cook (2002) and Blakeslee (2001) and correlated to previous research.

**Results:** Students in the course described developed new literacies (per Cook) and participated in a process of gradual exposure, experiencing “exposure, authenticity, transition, and response” as Blakeslee (2001) stresses, to professional, workplace communication genres.

**Conclusions:** This client project can serve as one model for the kind of bridge for which Blakeslee et al. have called. A critical part of any bridge is its two “destinations,” so our study points to both footings of such a structure—academic learning modules and workplace practices—both of which must be further explored by technical communication faculty and the technical communication professionals with whom they collaborate and with whom they confer about university program efficacy.

**Keywords:** client projects, publications management, workplace preparedness, enculturation, layered literacies

Practitioner’s Takeaway

- University client projects serve as effective bridges to “real world” scenarios in the technical communication profession.
- Planning, marketing, editing, managing, and production activities undertaken by students reinforce key literacies necessary for successfully transitioning into professional roles.
- Students strengthen social literacy skills through exposure to professional editors.
Introduction

In Technical Communication Quarterly’s 2001 special issue devoted to blending school and work, Ann Blakeslee called for curricula in technical communication programs that would “bridge classroom and workplace contexts for students and expose them gradually to workplace practices and genres” (p. 170). Over a decade later, this call still resonates loudly with technical communication educators. At New Mexico Tech, technical communication faculty members have long worked to address this call by Blakeslee et al. Our program sought to “bridge” these contexts in a variety of ways, including mandatory workplace internships, workplace- and profession-oriented Senior thesis projects, and the regular input of the program’s corporate advisory board. Even with these efforts to “expose [students] to workplace practices and genres,” New Mexico Tech’s Technical Communication faculty were eager to continue to develop these efforts, to prepare students in novel ways for new workplace writing and technology scenarios. For this reason, we were eager to integrate the production of an established online academic journal into program offerings, as journal-production would be a unique kind of client project for our Technical Communication majors.

With her theoretical framework for technical communication pedagogy, Cook’s (2002) work supports instruction that enables students to develop basic, rhetorical, social, technological, ethical, and critical literacies. Classroom activities and assignments with rhetorical situations that extend beyond the classroom, such as those centered around client-based and service-learning projects, often lend themselves very well to helping to foster these literacies. As Cooke and Williams (2003) argue, “The applied nature of technical writing as a discipline makes the college classroom an appropriate forum for merging theory with practice” (p.1). Research studies by Ford and Newmark (2011); Ford, Bracken, and Wilson (2009); Ward (2009); Paretti (2006); and Blakeslee (2001) have highlighted the “heightened sensitivity to audience” students experience when working on communication projects with more than the instructor as the end user (Blakeslee, 2001, p. 181). As Paretti (2006) states, one of the advantages is that “content, organization, and document design become functions of how the audience uses the information, rather than decontextualized rules” (p. 191). Turnley’s (2007) work highlights the valuable role service-learning projects can play in helping students to examine and reflect upon the role of technology.

Such applied approaches to teaching technical communication do not come without challenges. As Paretti (2006); Taylor (2006); Wojahn, Dyke, Riley, Hensel, and Brown (2001); Taylor (2001); Kastman Breuch (2001); and Wickliff (1997) have noted, there are inherent difficulties for both students and instructors in client-based projects. Paretti states, “Locating community or industry partners, mediating between students and these client organizations, balancing organizational versus academic timelines, and related management issues often preclude successful implementation” (p. 190). These challenges also include tasks that are not as clearly described or as highly structured as typical course assignments. Yet, as Freedman and Adam (1996) and Grice (1997) argue, there are benefits to ill-defined tasks, as sometimes a highly structured environment “deprives students of acquiring skills and a flexible attitude toward their work they will need later in their careers” (p. 219). Experiencing the complexity of “real-world” projects and understanding the consequences of writing, editing, and producing communication products for an audience beyond the classroom provides students with essential project management experience and creates a problem-based learning environment “where students develop the kind of audience awareness necessary to successful workplace communication” (Paretti, 2006, p. 191). Such experience is argued by both Cooke and Williams as one of the most beneficial aspects of client-based projects.

The Technical Communication “Publications Management” course directly addresses these concerns, while pacing students through the process Blakeslee outlines (“exposure, authenticity, transition, and response”). In our “Publications Management” course, students were not only responsible for completing various writing projects related to the final completion of an online journal issue, but they were responsible, more importantly, for the project management aspect, with only basic “deadlines” predetermined by the course professor. The exit interviews, cited later in this article, reveal that the course taught students to have a flexible approach toward problem-solving. As measured through the student feedback collected in exit interviews, the
course succeeded in reaching those objectives. Yet such a data-collection tactic is necessarily incomplete, and thus the lasting value, outside of academia, for students of this within-university learning opportunity can only be suggested here. We offer our findings as related to the ways in which students developed new literacies (per Cook) and participated in a process of gradual exposure, as Blakeslee (2001) stresses, to professional, workplace communication genres. We argue that a course like our “Publications Management” elective can serve as one model for the kind of bridge Blakeslee et al. have called for. A critical part of any bridge is its two “destinations,” so our study points to both footings of such a structure—academic learning modules and workplace practices—both of which must be further explored by technical communication faculty and the technical communication professionals with whom they collaborate and with whom they confer about university program efficacy.

That the “Publications Management” course satisfied both student and New Mexico Tech’s Technical Communication program goals indicates that this elective course, which might be designed at other institutions as one that focuses on publications other than academic journals, satisfactorily served the needs of two constituencies: students and faculty. The third constituency, of course, is comprised of the professionals with and for whom these students will eventually work. The purpose of this article is to point to the extended worth of this course and to suggest other possible iterations at other institutions. Certainly, we hope that our analysis indicates potential relevancy of courses such as “Publications Management” for this third constituency: technical communication practitioners. Our findings further push open a window on a critical subject that academic stake-holders and technical communication professionals must examine: can client projects within a university setting serve as effective bridges to “real world” and higher stakes document- and publication-creation scenarios in the technical communication profession? Long-standing calls by scholars in the field to engage with these issues are the ones that we address and on which we expand in this study.

Methodology

In this article we begin by providing background information about the Xchanges journal and the role it plays in our program. We then detail how Xchanges was tied to the “Publications Management” course through an overview of course objectives, requirements, and specific assignments. Our primary method of assessing student learning and measuring their “gradual” introduction to professional discourses and practices (and the “gradual” aspect is a feature that Blakeslee, for one, legitimizes as valuable) was the exit-interview process at the conclusion of the semester. These exit interviews, which were digitally recorded and later transcribed, were held in a faculty office setting, between the course professor and individual course students, and were comprised of a series of eight questions. These questions will be discussed further in a later section (see Table 4), but it is important to enforce here that while this means of assessment, the exit-interview, produced responses by students that might at first blush seem anecdotal rather than broadly applicable, we found that students’ feedback did indicate that their experiences of the academic-journal client project resonated with the data other scholars have collected regarding client projects and experiences that provide professional writing contexts (Cooke & Williams, 2003; Freedman & Adam, 1996; Harrison & Katz, 1997; Wojahn et al., 2001). Thus, despite the small sample-size of students in the study group, we found that their comments pointed to take-aways pertinent to other client-project situations and other university settings, thereby indicating that our findings were not isolated or idiosyncratic.

Thus, we assessed the Xchanges journal/“Publications Management” project, and its capacity to serve as a tool for teaching audience sensitivity and encouraging workplace preparedness, in three ways:

a) through students’ performance on course-required document-creation and presentation projects, b) through students’ ability to complete the project required by the “client,” Xchanges, in a largely self-directed manner that honored the timeline set by the journal, and c) through the students’ feedback regarding the course’s applicability to their field of study and understanding of workplace expectations. Certainly, students’ understandings of “workplace expectations” may not match with the actual expectations of future employers. However, we contend
that client projects—in this instance, the production of a journal issue—educate students about probable, certain, and assumed workplace scenarios. This collision of “actual” preparation with presumed preparation is yet another way in which client projects in university settings help to gradually—and in this case, in a student-led manner—acclimate students to the demands of a profession that they will enter upon graduation. Our students have knowledge of specific workplace practices not just via their coursework and specific contributions to faculty research initiatives but also as a result of the involvement of our program’s corporate board in annual meetings with students (for further discussion of both, see Ford, Newmark, & Lanier, 2012). From interactions such as those between board members and students, our students gain a sense of what will be expected of them in the workplace as writers, document-creators, and communicators. Because of the students’ expectations, as generated by their coursework and the feedback they receive from industry professionals, they are able to articulate whether they see journal-production work, such as that required in the “Publications Management” class, as relevant to their future careers. The assessment from the other side, from professionals themselves, is the obvious other part of this equation, something we call for as part of future research.

### The Xchanges Journal: Producing an Issue From Within an Upper-Level Technical Communication Course, “Publications Management”

#### Xchanges Background

In 2008, Xchanges moved from its previous home at Wayne State University in Detroit to its new home at New Mexico Tech because of the relocation of the journal editor. The journal had long been invested in serving as a forum of scholarly emergence for undergraduate students and graduate students from American and international institutions. The journal’s mission was to serve as a professionalizing domain for these students, as the article-submission and review processes mirrored those of print and online journals that publish articles by senior scholars. As a consequence of conversations between the journal editor and the director of New Mexico Tech’s Technical Communication program, Xchanges reemerged with a modified thematic focus, conforming to the Technical Communication major’s goals.

During the 2008-09 academic year, the Xchanges editor worked to promote the journal’s move and its reinvention. She networked with technical communication and composition faculty at numerous universities to alert them to the journal’s existence as a possible publication venue for their advanced undergraduate students and graduate students. Also during this time the review board was created; the board is a collection of professors in the journal’s focal disciplines who serve as blind reviewers for the undergraduate and graduate-student submissions. This double-blind review process helps to further the journal’s audience-awareness mission, a key goal of the journal’s, in that students receive discrete feedback from faculty members outside of their own university who assess the efficacy of the writers’ rhetorical and aesthetic practices.

By Spring 2010, the re-invented Xchanges journal had published one issue and sent submissions for the next issue, the annual graduate-student issue, out for review. To address some of the time-and-staff resource deficits the journal faced, the Technical Communication program director and the Xchanges editor decided to push for the inclusion on the Fall 2010 class schedule of the Technical Communication elective “Publications Management.” Prior versions of the course emphasized reading and analyzing case studies of publications projects. The new course design for 2010 would seek to utilize Xchanges-journal-issue-production as the client project for the semester; a real-world, established publication would serve to enforce for Technical Communication students the time- and project-management skills that would be absolutely demanded in publication-production work.

Blakeslee’s case studies focused on students working on client projects involving off-campus clients and the client in our case was technically on-campus; our study and hers, then, cannot be described as exactly parallel. However, the fact that the Xchanges journal and its authors represented a distinct audience beyond that of the course, with specific writing projects and deadlines, allowed it to serve as a bridge between school and professional contexts, as described by Blakeslee.
Overview of Technical Communication 371 Course and Xchanges Issue 6.2

The Xchanges journal editor served as the course instructor for the “Publications Management” course, which began in August 2010. The course sought to exercise certain principal Technical-Communication-program learning objectives through the specific but multi-dimensional task of journal-issue production. Specifically, in the “Publications Management” class students would work to satisfy TC program goals while honing skills related to document creation and editing that are vital in workplace settings. In the “Publications Management” course, students were required to develop proficiency, as related to electronic publication production, in:

- Editing
- Critical thinking
- Oral presentation
- Research
- Interactive group work
- The creation of annotated bibliographies
- The creation of observational reports

Certainly, the last two items listed above are assignments native to academia; these exercises seek to help students to locate and deeply understand research sources so that their own work will be informed by best practices in the technical communication field, as undertaken by academics and practitioners alike. The first five items are capacious indeed, but in their specific

Table 1. Part “A” of Student-Assessment Criteria: Written Assignments Required of Students, Fulfilling Academic Requirements

<table>
<thead>
<tr>
<th>Assignment name</th>
<th>Value</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Journal research report</td>
<td>15%</td>
<td>• Overview of Xchanges and its production history</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Overview of other journals in focal area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Description of academic journal “industry”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Based on findings, recommendation of area of Xchanges to improve to aid journal’s future growth and relevance</td>
</tr>
<tr>
<td>Annotated bibliography</td>
<td>5%</td>
<td>• Provide citation information, summaries, and evaluations of at least fifteen scholarly articles related to Journal Research Report</td>
</tr>
<tr>
<td>Observational report</td>
<td>10%</td>
<td>• Attend three in-person and Skype presentations by journal editors from New Mexico Geology, New Mexico Law Review, and Kairos.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A two-page report that documents the main tenets of one journal editor/ journal’s production process, with full descriptions of each element</td>
</tr>
<tr>
<td>Weekly activity reports and textbook reading log</td>
<td>15%</td>
<td>• An activity report detailing hours in and out of class dedicated to work planning, editing, producing, corresponding for, promoting, or researching about aspects of the Xchanges journal, supplemented by a brief summary of the week’s reading</td>
</tr>
<tr>
<td>Final group oral presentation and procedures proposal, with digital accompaniment</td>
<td>15%</td>
<td>• A final oral presentation, employing the appropriate technology, to demonstrate progress on assigned component of Xchanges production</td>
</tr>
<tr>
<td>Xchanges production work</td>
<td>40%</td>
<td>Each component worth 10%:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project management (of group’s designated area: editing, technical design/management, correspondence/promotion)</td>
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<tr>
<td></td>
<td></td>
<td>• Documentation of process in designated area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Team planning and group/self assessment</td>
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<td></td>
<td></td>
<td>• Effort</td>
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</table>
relation to practices of document and whole-publication production, these course requirements provide specific, targeted practice that, the goal is, can be transferred to a workplace setting.

The course design of TC 371 was informed by the assessment framework outlined by Blakeslee in 2001—“exposure, authenticity, transition, and response”—that academics can use to measure the efficacy of client-project pedagogy as used in classroom settings. As Blakeslee notes, a goal of technical communication professors is to provide our students with “useful transitional experiences that bridge classroom and workplace contexts” (p. 189). As a transitional experience, the “Publications Management” class sought to fulfill Blakeslee’s call for “gradual” enculturation of students to “workplace practices and genres.”

From the academic side, students were still expected to perform tasks for which they would receive grades. Table 1 shows the written and participatory work required of students in “Publications Management,” work that constitutes student-assessment Part A, the part of their overall course grade determined by their course professor. As the information in the “Description” column shows, the students’ engagement with the journal-publication field was extensive during the class, ranging from their own research into and reading of academic journals for their annotated bibliographies and journal research reports to their participation in Q&A sessions with academic journal editors from various disciplines and the resulting observational report their subsequently crafted. Because of this exposure to the field of academic publication, an exposure that certainly pushed the substance of the course beyond the confines of New Mexico Tech’s institutional boundaries, students were introduced to the meaning and professional context of the journal-production work they would also perform in the course.

Table 2. Part “B” of Student-Assessment Criteria: Group Projects Leading to Ultimate Journal-Production, Fulfilling Client Requirements

<table>
<thead>
<tr>
<th>Group name</th>
<th>Group deliverables</th>
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| Editing                     | • Correspond with accepted authors regarding revision/editing requirements per readers’ reports  
• Craft and distribute “editing checklist” to accompany acceptance letters to authors  
• Perform first-pass copy-editing on completed manuscripts  
• Format all articles for multi-page appearance in Web-interface and for single-text appearance as printable PDFs  
• Format author bios for Web sidebar  
• Proof all text content on site for current issue |
| Web design/management       | • Assess pre-existing Xchanges Web site for sitewide concerns  
• Assess three content management systems (CMSs) for possible adoption by Xchanges (Joomla!, Drupal, Wordpress)  
• Upon choosing CMS system, create new Xchanges design and integrate archive into new system  
• Trouble-shoot design and modify CSS of Joomla! template to suit Xchanges’s needs as a multi-modal journal  
• Craft permanent menus and sitewide frameworks for Issue 6.2 and future issues  
• Collaborate on solving multi-media integration problems as deadline approaches |
| Correspondence/promotion    | • Create contact list of all Xchanges stake-holders (past authors, faculty review board members, program directors at other universities, home institution media and administration contacts)  
• Collaborate with New Mexico Tech media officer on articles for New Mexico Tech Web site and publications  
• Collaborate with editor on “accept” and “decline” letters for submitters  
• Contribute to cross-group online “to-do” list as deadline approaches (GoogleDocs)  
• Oversee cross-group project-management spreadsheet on GoogleDocs |
While 60% of students’ course grades were comprised of written and research work commonplace in university classes, the 40% allocated for journal-production work represents the tasks that students performed both in class and on their own time on the “real” client project around which the course was designed. Students in the small course (of six students) were divided in three teams for the journal-production work: the editorial team, the redesign team, and the promotion/correspondence team. Table 2 shows the deliverables with which each group was charged by the journal editor; these tasks constitute assessment Part B, for which the audience was the journal readership, authors, and faculty submission-review board. The degree to which the students served these audiences’ needs determined their performance on Part B. Before students could begin work on the above-named tasks, certain decisions were made across groups, a practice that parallels one common in workplace settings: in-group and cross-group collaboration (Cooke & Williams, 2003; Wojahn et al., 2001). One of the class’s first tasks was to assess and decide upon a project management tool to use to plan, chart, and indicate the completion of the necessary “steps” along the way toward the launch of the Xchanges issue they were required to produce: Issue 6.2, the “themed” graduate student issue. Ultimately, the class decided to use a GoogleDocs spreadsheet to identify and schedule the necessary parts of their own projects and to see the other projects with which the other two teams were engaged.

The three groups needed to make one more collaborative decision before each group could embark on its own work. Based on an assessment of the existing Xchanges site’s usability, all students agreed that another design was necessary. For this decision, the Web redesign team led the way, employing feedback from the other two teams, to build a model new site using Joomla! as the content management system. The Web design team, along with the editing team, also decided that, for accessibility reasons, all articles, “skinned” Web sites, and presentations in each Xchanges issue would also need to be available for download as PDF, for those users for whom reading or viewing Xchanges content on a monitor screen was not ideal or possible.

With these decisions made, the groups embarked on completing the required projects necessary to bring the myriad sub-components of the journal issue together by the pre-set launch date. Informed by their “academic” course-requirements (the research, writing, and observational exercises described in Table 1) related to journals in general and Xchanges specifically, the groups spent the second half of the semester in a largely self-directed manner, collaboratively working and regularly consulting with their course professor with the mandate of fulfilling the client’s directive: to release Issue 6.2 of Xchanges.

Cook’s “Layered Literacies” in Action

The Xchanges journal possesses multiple audiences simultaneously: the multifaceted readership, the twenty-member national faculty review board, the undergraduate student submitters and authors, and the graduate student submitters and authors. Because those involved with the production of the journal need to serve all of these groups, the practice of producing journal issues is a practice that uniquely addresses both “audience” and “rhetorical situation” from a document-production standpoint. All involved with the journal concern themselves with the end-users, those who read and publish in (sometimes an overlapping audience) the journal. By its very nature, then, the practices of production of a publication like Xchanges afford those involved with this production the opportunity to think about the needs of the audiences and the tactics one might use to appropriately serve them via rhetorical decisions related to both text and images. So, Xchanges-journal production is ultimately audience-oriented. But in serving this audience, those working on production can simultaneously improve multiple literacies at once. The multiple literacies for which Cook (2002) calls—“basic, rhetorical, social, technological, ethical, and critical literacies”—are taught, then, in a course like “Publications Management” in a lasting and professionally preparatory way. As other scholars have amply noted (Blakeslee, 2001; Freedman & Adam, 1996; Harrison & Katz, 1997; Paretti, 2006; Wojahn et al., 2001), integrating activities into the classroom, such as client-based projects that introduce professional rhetorical situations and bridge across the university/workplace divide, is useful in the development of dexterous technical communicators who can eventually enter various professional settings with greater ease.

As Cook notes, the above-named “layered literacies” “can be applied to a program of study or an individual
course” (p. 11). In this section, we hope to show how “Publications Management” necessarily reinforces these literacies in students, as students have already been exposed to each in other Technical Communication program courses. The particular benefit of “Publications Management” for layering these literacies is that it is the essential nature of journal-issue-production that literacies will cross over and be simultaneous. “Basic literacy,” the first-named in Cook’s list, is most usefully developed, as she writes, when it is layered with other literacies rather than taught in a rote fashion (in the form of basic grammar and structure exercises). When students are working with a journal as the editorial and production staff, as they are in our “Publications Management” course and as they would be in other institutions’ courses focused on single-client document production, students come to question their own “basic literacy” practices by reading the work of the accepted authors. In the case of Xchanges, the students in “Publications Management” came to see the variety of tactics the four graduate-student authors used to deliver their arguments, a variety that was particularly marked by the graduate students’ particular areas of focus (for example, rhetoric or writing center work, and the requisite vocabulary in these areas) and the English-as-a-second-language features of certain submissions. Students were not reading about this variety in a textbook, but were engaging closely with the “basic literacy” variety from their new vantage as editors and journal-issue producers, and thus stake-holders. By researching the standards and customary rhetorical style of other academic journals with similar thematic foci to Xchanges, the students came to better understand what the rhetorical situation of the journal was and how to help bring the journal’s authors closer into conformity with that standard. In this way, the students simultaneously engaged with Cook’s first literacy, “basic” and the second, “rhetorical.”

Cook notes that the third literacy, “social literacy,” might be measured by students’ “team reports” or their participation in “electronic discussion forums” (p. 12). “Publications Management” aimed to improve students’ social literacy by helping them to better understand “organizational settings”; employing a suggestion of Cook’s, students participated in versions of “interviews” via visits with three editors of established journals. The editors of the journals New Mexico Geology (a print journal), New Mexico Law Review (a print journal that is developing a Web component), and Kairos (an online-only multimodal journal in the Rhetoric and Writing field) visited with “Publications Management” students in person and via Skype. Further, we aimed to integrate this literacy-enhancement activity with our specific client-project exercise through a Q&A session intended to allow students to learn specific tactics used by established journal editors that they might employ in their work with Xchanges. To follow up on this Q&A, “Publications Management” students wrote their own reports on the journal-editor visits and talks, their individual “Observational Reports” (see Table 1), and used the information they gleaned from these talks in their collaboratively devised plans for their groups’ achievement of its deliverables (see Table 2). These exercises very much strived to improve students’ “social literacy skills” in that the students, as Cook calls for, “[worked] effectively with others in a variety of capacities” (p. 12).

In regard to “technological literacy,” students in “Publications Management” received wide exposure to aspects of this layer. Students engaged with tools that required them to develop technology-program literacy (ranging from their use of GoogleDocs to their use of the Joomla! CMS). Students also moved from these “local” in-lab technology experiences, to which Cook refers, to “wide-area” technological exchanges that required of them further new literacies. Their wide-area exposure included their long-distance editing and distribution experiences with Xchanges writers, faculty review board members, and the other journal editors. This broad exposure to the technological literacy layer was a direct attempt to prepare students for future Technical Communication workplace scenarios.

Students in the Xchanges “Publications Management” course had experience in all three levels of technological literacy that Cook mentions: “As rhetoricians who study audience knowledge, preferences, and requirements for technology; as architects who take this research and use it to construct technology documentation to meet audience needs; and as usability researchers who take their written product back to the audience to critique how well the documentation and the technology work for the audience” (p. 14, italics added). To clarify, “Publications Management” required that, prior to site-wide journal redesign
with the Joomla! CMS, students study the usability of the previous Xchanges site. Subsequently, students continued into the second “technological literacy” stage: recognizing the process they would need to use to document their group’s use and/or revision of preexisting Xchanges components and their group’s use of multiple technologies to complete their required journal-production work. All groups had to complete a documentation project (their “Procedures Manual,” see Table 1) that explained their group’s deliverables and their accomplishment of goals, a task that required them to think of their experiences with multiple literacies at once. Table 3 shows how their various technology-engagement practices in “Publications Management” indicate the responsiveness of the “Publications Management” course design to calls such as Cook’s for multi-level technological literacy.

The final stage noted above, when students enter the role of “usability researchers,” is a stage that the Xchanges journal-production client project serves particularly well. Students need to determine not just what an audience would “prefer,” but what kinds of journal-design elements will be most usable to various journal readers and what technological details, delivered in what format and design, will be most useful to future New Mexico Tech students who might need to use their “Procedures Manuals” for Xchanges production on future issues. Thus, students conduct usability tests for two user groups: journal readers/writers and future journal-issue producers. The reality of the bifurcated nature of journal-use and -production requires that students constantly concern themselves with the needs of multiple audiences.

In terms of the “ethical literacy” layer, students in “Publications Management” engaged with ethical concerns particularly in regard to site design, journal-article document creation, and interactions with their peers and with field professionals. Following on Cook and Wahlstrom’s suggestions, and building on the STC Ethical Principles for Technical Communicators that Cook also notes, students came to understand the “ethical implications of their decisions” regarding “legality, honesty, confidentiality, quality, fairness, and professionalism” (Cook, 2002; STC, 1998). In regard to confidentiality, students worked carefully to honor Xchanges’s confidentiality practices in regard to double-blind submission-review, by protecting the anonymity of the review board members who reviewed particular submissions and protecting authors from having identifying information revealed to review board members. Also, students discussed the ethical implications of including author photos in the Web site sidebar, along with author biographical information. Ultimately, students decided it would be unethical to include photos, as the purpose of Xchanges is to provide readers with new scholarly research information and an author photo would not enhance the delivery of this information.

“Critical literacy,” the final layer Cook notes, is one that Cook identifies as the “most difficult” to integrate, yet it is essential, in that this literacy enables technical communicators to see themselves as those who give voice

<table>
<thead>
<tr>
<th>Three levels of technological literacy, via Cook</th>
<th>Student activity</th>
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<tbody>
<tr>
<td><strong>“As rhetoricians who study” audience’s needs for the technological product: each article published in Xchanges</strong></td>
<td>Attending to Xchanges’ writers’ grammar and editing issues; scrutinizing design, format, and pagination issues in the Xchanges Web site</td>
</tr>
<tr>
<td><strong>As “architects who take this research and use it to construct technology documentation to meet audience needs”</strong></td>
<td>Creating documents for two audiences: Xchanges users (the Web site and its included articles) and future New Mexico Tech students who might work on the Xchanges project (each group’s “Procedures Manual”)</td>
</tr>
<tr>
<td><strong>As “usability researchers who take their written product back to the audience to critique how well the documentation and the technology work for the audience”</strong></td>
<td>Corresponding with Xchanges’ writers during final editing; testing site for usability across groups; presenting and testing “Procedures Manuals” across groups</td>
</tr>
</tbody>
</table>

Note: Italics added to Cook
to people who might not have access to communication domains, whether because of gender, religion, race, disability, or class. Students in “Publications Management” did see that the freedom afforded by the electronic nature, as opposed to a print nature, of Xchanges gave the journal a certain unique capacity to serve many more groups of readers, and writers, than other modalities might. For example, because of the Web-interface chosen by the students (the new design and the Joomla! CMS used to archive old issues and prepare new ones), students realized that Xchanges could further its mission of “inclusiveness,” to welcome new voices into the research and professional conversations in the fields of technical communication, writing, and rhetoric. The constituency served by the journal, graduate student and undergraduate student writers and researchers in these fields, traditionally are kept out of the professional scholarly conversation in these fields and are the consumers rather than the producers of new research. Because Xchanges’s mission is to function as a space for these scholars to equally participate in scholarly innovation, the “Publications Management” students deeply engaged with the “critical literacy” layer, in that these students served to promote and propel the sometimes-silent scholarly voices of undergraduate and graduate-student writers in the meta-domain of the “academic journal.” Further, students worked to ensure that the ejournal could serve as many users as possible. Students’ critical awareness of the limitations users might have, limitations that might impact their enjoyment of and interaction with the journal, guided their decisions, specifically those concerning color-choice, font-size and face, availability of PDFs for download, and the inclusion of stand-alone “audio” tracks for the multi-media research included in the issue (in the form of one published Prezi presentation).

As the following section will examine, in course exit interviews students reflected on these multiple literacies, though they did not use the terms Cook offers. As Cook used a TC-major capstone course at her institution to examine the possibility of integrating these literacy layers into course-design and technical communication curricula, at New Mexico Tech we also used one course to examine how a client-project-based course could serve to support this integration, with the goal of further professional preparedness for our students. In exit interviews, students became the commentators on and assessors of the merits of the simultaneity of their “literacy” education in the “Publications Management” course, indicating that their sensitivity to technological, social, and rhetorical literacies was improved and demanded by the ultimate deliverables each group and the whole class had to achieve for the Xchanges journal.

As Cook’s experience and our experience both support, different iterations of courses and client-projects might be used in university settings to improve student literacy sensitivity, with the aim of preparing students for the layers of literacy they will need to employ simultaneously and naturally once they enter the workplace. As Cook and her colleagues sought to redesign a course within their curriculum to prominently feature the teaching of these literacies so as to “prepare students . . . more fully for the transition from their undergraduate studies to the workplace,” at New Mexico Tech we also strived to offer the “Publications Management” elective as an instance wherein “preparedness” and “transition” would both be central as necessitated by the unique nature of the client project (p. 18). Thus, a capstone course model and a client-based elective model are just two examples that can be studied by academics and professionals both as attempts on the part of university-based technical communicators to prepare students to transition into the profession. Industry professionals might glean from this material that students are increasingly being prepared by their technical communication programs to enter the workplace having had such client-based experiences and having been exposed to the multiple literacies “throughout their courses of study,” as Cook urges (p. 7). Such exposure will benefit their professional output, their companies, and their clients in the future.

**Student Exit Interviews: Assessing the “Publications Management” Course as a Professionally Preparatory Client Project**

In 2001, Blakeslee formulated a process of “gradual” exposure to professional practices that might be delivered through technical communication client-project courses. “Students and newcomers,” she writes, “may benefit from experiences that bridge the two contexts [classroom and profession] and that facilitate this graduate entry” (p. 172). Client projects can serve to introduce students to the demands and kinds of response/feedback they will receive in workplace settings. Both of the case studies
Blakeslee discusses involved a technical communication course’s work with an outside-of-classroom client; in her first-mentioned course, the client was “three technical writers from a large computer and electronics company” and in her second-mentioned course, the client was “two linguists who had founded and who administered a large Web-based listserv for their discipline” (p. 174-5). Both clients gave the respective courses a series of deliverables. Blakeslee’s concern in this well-known research project was to assess the benefits of these kinds of “classroom-workplace collaborations.” Her framework consisted of four issues – “exposure, authenticity, transition, and response”—that could be specifically examined as they relate to student learning in these client-project-based courses.

“Exposure” served as Blakeslee’s identifier for the practice of introducing students, exposing them, to “workplace practices and genres,” even though such exposure, given its “school” setting, can’t necessarily be immersive. The second issue, “authenticity,” concerned students’ impressions of their client-project experiences as either accurate or artificial representations of workplace projects and demands. Blakeslee studied the issue of “transition” as it related to the ways in which client projects might “facilitate students’ transitions to the workplace”; of particular interest to her was the notion that such classroom-situated client-projects can serve as bridges to the expectations of the workplace while still being rooted in the “supportive environment” of their university setting. Finally, by analyzing “response,” Blakeslee scrutinized the feedback students received both from the clients and their course professor. Blakeslee identified many notable issues with “response” type and quality, particularly as related to the sometimes “very critical” feedback students received from their clients.

As in Blakeslee’s study, at the conclusion of the “Publications Management” technical communication course, students completed interviews. Because the “Publications Management” course was small, the concern that their responses might be merely anecdotal might arise. However, some of their responses correlate to those offered by Blakeslee’s students in her client-project-based technical communication courses. The difference with the “Publications Management” course, though, was that the students had regular and direct access to one of their clients, their course professor who was also the journal editor. Also, their entire course (rather than two-thirds of the semester) was dedicated to tasks associated with the completion of this single client project. The explicit purpose of our students’ course was to serve a client’s needs and thus, their expectations were to produce incremental and final deliverables for a specific, client, the Xchanges journal. This singularity of purpose is one notable difference between our students’ experiences and those of students in Blakeslee’s study, in which the client projects took place in two courses designated as, respectively, an “introductory” “300-level” technical communication course and a “computer documentation” “400-level” course. Because students’ pre-selected themselves for the “Publications Management” course by enrolling in it as a technical communication elective, they knew in advance that the expectation was for them to perform both written assignments to be assessed by their professor as technical communication professor and to produce deliverables related to a journal-issue release, which would be assessed by their professor as journal editor, a key representative of the larger “client,” and by the more diffuse collective of journal stakeholders.

Because of the access they had to their client, students certainly felt a degree of comfort, an idea Blakeslee also mentions related to the university setting, that they may not have in a workplace upon graduation. The information gathered during exit interviews, though, shows that students believed that the Xchanges journal-project was indeed an “authentic” experience, despite the familiarity of the university setting. Regarding Blakeslee’s other criteria—exposure, transition, and response—the exit interviews provide useful insight into how the “Publications Management” version of a client project produced responses from students that differed in notable ways, and correlated in notable ways, to previous studies concerning the integration of client projects in TC curricula as means of preparing students for workplace scenarios and expectations.

In exit interviews, students were asked a series of eight questions (see Table 4). The responses to these questions had no impact on students’ grades and were collected in computer files that bore pseudonymic identifiers rather than students’ actual names. Institutional Review Board approval was received for this component of research. As the first few questions reveal, the course sought to expose students to a field, the scholarly publication field, as an example of a type
of industry that has a specific documentation and publication history, standard, and practice. By meeting with journal editors, students had individual contact with producers of publications. By crafting their own annotated bibliographies, students came at the field of academic research publications from a different angle, as researchers themselves who sought to recommend changes/improvements for Xchanges based on their own research into best practices concerning design, CMSs, copy-editing, promotion, and editing. The fourth question gets at another issue of Blakeslee’s: authenticity. In interviews, students were asked to speculate (based on their knowledge from other TC classes, research-group participation, internships, and contact with New Mexico Tech’s Technical Communication corporate advisory board) on the authenticity of their Xchanges journal-production experiences and its relevance for future work in the profession. The issue of “transition” is also at the heart of interview questions concerning the relevance of the “Publications Management” class to future workplace scenarios. Regarding “response,” students did not address this component of Blakeslee’s four-issue analytic frame in their interviews, as no interview questions specifically asked them to comment on the feedback and critiques they received from each other in class, from their course professor, or from other Xchanges-journal stake-holders. Students did receive “responses” throughout the term (on the items in student-assessment Part A, their written assignments for the course, and on Part B, the component of journal-production for which they were responsible). But, unlike in Blakeslee’s study, students did not indicate frustration with “overly” critical feedback from their client. The workshop-nature of the “Publications Management” class and their regular contact with the journal editor (as their professor) and with the article writers via e-mail perhaps caused this difference in student attitudes regarding the nature of “response” as compared to Blakeslee’s study. The fact that the course professor also served as the journal editor eliminated the constraints noted by Taylor (2001) of lack of awareness of client standards and by Kastman Breuch (2001) of students failing to understand how to interact with the client “to discuss differences of opinion or clarify client needs” (197).

Table 4. Interview Questions for Twenty-Minute Student Exit-Interviews

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<tr>
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<th>Question</th>
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<tr>
<td>1</td>
<td>What knowledge did you have of academic journals prior to this class?</td>
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<tr>
<td>2</td>
<td>How did your TC 371 experience change the way you view academic journals?</td>
</tr>
<tr>
<td>3</td>
<td>How did your TC 371 experience change the way you view research and the communication of it?</td>
</tr>
<tr>
<td>4</td>
<td>If you were on a job interview and asked to speak about how your TC 371, or Xchanges journal, experience prepared you for a job in a professional environment, what would you say?</td>
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<tr>
<td>5</td>
<td>What did your experience in TC 371 teach you about project management?</td>
</tr>
<tr>
<td>6</td>
<td>As you reflect on the goals of a TC class or a TC curriculum, would you say that TC 371 effectively addressed these goals? How so or how not?</td>
</tr>
<tr>
<td>7</td>
<td>If you could change one thing about the class, what would it be?</td>
</tr>
<tr>
<td>8</td>
<td>What do you think the class’s greatest strength is?</td>
</tr>
</tbody>
</table>

Particular student answers, of course, warrant focused attention, such as those concerning “authenticity” and “transition.” The most revealing answers concern the journal-work’s significance to students’ curricular progress and future fulfillment of career goals, which came in answer to the question “What do you think the class’s greatest strength is?” One student contended that the Xchanges-production project “[a]ccurately model[ed] a management project. [It] shows you exactly what it’s going to be like.” This student, who had prior work experience in the advertising field, felt that the production process that the class experienced resonated well with the “realities” of the workplace, thus proclaiming that the Xchanges client project was “authentic.” The student added that “the presentations” by visiting editors were particularly edifying and reinforced the persistence of deadline-stress to all journal editors and staff members. “We did get behind on the project,” the student stated, “but when we talked to” the editor of Kairos “we realized that even
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if it takes longer to get it out, it matters that when it finally gets out that it’s correct” and error-free. This comment reinforces students’ developing knowledge of the mandates of the editing process, a process that tracks alongside the design process, vying with it for priority. Through their experiences of “exposure,” via the journal-editor visits and their own research about and by using scholarly journals, students recognized that their own experiences were not dissimilar from those of other, more senior journal stake-holders. As the interview-question responses show, the issues of “authenticity” and “exposure” are necessarily related, as the broad “exposure” to a field students received in a course like “Publications Management” helped them to understand whether their experience was “authentic” or not.

The realization that the quality of the final product mattered more than adherence to a deadline indicates the special quality that the Xchanges journal project lent to the “Publications Management” class; in a university setting, deadlines are typically non-negotiable and are set not by students, but by their professor. Indeed, with the production of a project for a client, there are also deadlines, but students in “Publications Management” themselves felt the stress of the approaching deadline and knew that they might be the ones who determined whether it would be met or extended. When students realized that they were “behind” and thus had to re-assess, they learned a valuable lesson about workplace projects that is quite different from university-setting projects. If the journal came out a week late, the readers and authors would not penalize them, though the journal’s credibility might suffer to a degree. The journal readers and authors would likely be more critical, though, if the issue came out “on time” and in a flawed format.

Another student stated that the class required students to practice “Time-management and [the] delegation of duties”; this comment resonates with an answer another student gave to a question concerning the relevant future-profession skills students learned in the “Publications Management” class. The student explained “The course prepared me to work in a complex self-paced collaborative environment. Many tasks needed to be accomplished simultaneously without direct and constant supervision,” a theme other students addressed as well, specifically in regard to their belief that they would now have the courage to seek collaborative contributions from team-members in a workplace setting and have the confidence to problem-solve on their own in order to reach the team goal.

Students made many comments in the exit interviews concerning technology usage in the journal-issue-production process, thereby addressing their exposure to the “technological” literacy layer in Cook’s framework. Students felt that, regarding technology, they would be able to ask questions of the “right” people or problem-solve on their own to reach a desired goal. Such technological success (or confidence in future success) contrasts with Wickliff’s (1997) study that named competence in using workplace computer applications as a difficulty experienced by students. Several students commented that the “remote visit” with the Kairos editor via Skype was a highlight of the course, particularly as this ejournal editor shared with them considerable valuable information and reinforced for them that the problems and triumphs they were experiencing were very similar to those experienced by the staff members of journals with much larger back-issue archives, more extensive technology integration, and wider circulation.

Also concerning technological literacy and “transition,” in the exit interviews students also repeatedly mentioned their happiness at using GoogleDocs as their central document repository. In response to the question “What did your experience in TC 371 teach you about project management?,” one student answered:

There’s a lot more groundwork that needs to be done with respect to the management and organizational side than I realized before. I thought that if you got a project, you started working on it, but there’s definitely work that needs to be done before you can start working on the project, getting things set up so it will run as smoothly as possible. GoogleDocs was really helpful, just to be able to manage everything in one place...was really helpful.

In the exit interviews, students referred to the class as more like “work” (seemingly in a positive sense) than a “class.” Students unequivocally viewed the Xchanges client-project as one that authentically replicated scenarios they were bound to face in future professions, likely because of the autonomy they had...
in reaching their own group’s deliverables and the responsibility they were given to solve problems without constant professorial oversight or the limiting structure of a more typical course. Students seemed buoyed by the degree of independence the class gave them to learn the nuances of publication-production and to problem-solve on their own, with their groups, and across groups. Students commented on the enhanced state of their understanding of the “world” of academic journals (a variant of what Blakeslee calls “exposure”), particularly in regard to the relationship between the research produced by scholars in a field and the publication of that research in journals. These findings suggest that students appreciated the incidental learning opportunities that happened and welcomed the chance to problem-solve.

In answer to the question “How did your TC 371 experience change the way you view research and the communication of it?,” one student remarked that “research,” in general, is “a lot more detailed than I expected.” Possessing “the knowledge” isn’t enough for a researcher; “the transfer [of that knowledge] has got to be meticulous in how it’s approached and conveyed.” This student felt that Xchanges’ multimodality was especially helpful—in fact essential—for the conveyance of some critical ideas in a researcher’s work. Some ideas, the student claimed, “cannot be relayed in one media… The multiple media is really an enhancement.” From the production side, one student commented that the journal-issue production process is “more collaborative than I thought it was,” beyond just the reality that many scholarly papers have “several authors working on” them. Many journal staff members also contribute to the emergence of research in print or online, the student realized. Based on the presentation to the “Publications Management” class by the editor of a regional geology journal, this student realized that “there are all those other people providing maps, illustrations, charts – another level of firsthand knowledge that supports that research. [All of this] makes the whole thing stronger. When you look at it from the outside, though, you see just one level.”

On the level of student learning, the students appeared to assess the class as a successful one, in the sense that it revealed to them many aspects of document creation and dissemination that they had no clear knowledge of prior to the course. Many students suggested that the course became a kind of “awakening” for them. They learned about the publication process (as it involves researchers, often as collaborative teams, plus many journal staff members) and the project-management process (a skill that many thought was easily transferable from a journal-production context to other workplace contexts). Students were clear in their indication that they learned management and technical skills that were transferable, thereby offering in their own words that they felt that they practiced multiple “layers” of literacy at once in “Publications Management.”

The students also speculated on the relevance of the “Publications Management” course to New Mexico Tech’s Technical Communication program goals. One student contended that the class was primarily helpful because of its insistence on quality writing practices (Cook’s “basic literacy”) in a context where the clarity of communication was quickly measured by readers, the journal editor, or the “strangers” who would read Web copy on the site or who would receive e-mails written by students asking for “support” of the journal (such as e-mails written to faculty at other institutions suggesting that they encourage their students to submit work). As clear and usable communication in text and graphic forms is, of course, paramount to our Technical Communication program, this student’s declaration that he took “Publications Management” “to be a better writer” and to develop “better writing habits” clearly reveals the student’s expectation. In his exit interview this student felt the class fulfilled Technical Communication program goals via its insistence on the practice of “editing concepts” as a means of reinforcing that “even if you do it a ton of times, it might [still] be wrong, in the wrong format”; the student believed that a clean and correct final product must emerge (also noted above in regard to the editing team’s work). While editing concepts and practices were not introduced in this course (an earlier course focusing solely on editing is required of all TC students), indeed students had ample opportunity to apply prior-learned editing skills.

Another student felt that the course reinforced “a lot of aspects from other TC courses I’ve taken,” such as “structure [and] layout of docs themselves.” This student’s feedback reveals a feeling that the ancillary course requirements also helped to bring together the skills they were practicing in their Web-related work
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on the journal site. Their audience was not only their professor but the entire readership and “community” of the journal.

Importantly, all students realized that one particular audience was depending on them in a unique way: the graduate-student writers whose work had been accepted for publication. These were key stakeholders and the “Publications Management” students very much wanted to present these graduate-student scholars’ work in the journal in a manner that was aesthetically strong and implicitly functional. For instance, if something did “not work” on the site, such as file-transfer-related language/text problems, these students were deeply committed to fixing these flaws before release, not just for themselves, but for the writers whose work they were responsible for presenting. The students were certainly aware of the multiple layers of audiences with whom they were simultaneously striving to communicate clearly. As their comments indicate, they felt they achieved the course goals but, as importantly, they felt they achieved many personal goals related to their suitability and preparedness for a future career.

Conclusion

By viewing New Mexico Tech’s “Publications Management” course through critical lenses offered by Cook's and Blakeslee’s research and through the specific lenses of our own institution's TC program goals, we conclude that our particular version of a client-project-based course amply served our institutional needs and our students’ professionalization needs. Of course, further research is needed to buttress this final claim, that the small group of students from “Publications Management” were, indeed, well prepared for similar document-production projects in future workplaces. A longitudinal study might be one that we consider beginning with the next iteration of the “Publications Management” course. We would also like to include involvement of members of the Technical Communication program’s corporate advisory board, as additional voices in the conversation to examine the relevance and “authenticity” of this client project and the degree to which it improves students’ literacy in critical areas necessary in professional settings.

Despite our recognition of future steps that might deepen this research, we are confident in the learning opportunities it has afforded our students already. We feel that our “Publications Management” project, specifically in regard to its multi-dimensionality and its ability support the “gradual” professionalization process that scholars such as Blakeslee support, is one that might be usefully modified to suit other institutions’ students, faculty interests, and available possible clients. As the information from this article reveals, the learning opportunity presented to students through this experience was both a structured and flexible one for students, since a principal goal of the course was fostering problem-based learning. The Xchanges project required students to use what Paretti (2006) describes as the “higher level analytical skills needed to connect…content and format with the needs of specific audiences seeking to accomplish specific tasks” (p. 189). It also provided students with the opportunity to practice authenticity and employ “rhetorical sophistication” that many communication assignments lack. Iterations at other institutions might similarly afford students the opportunity to sophisticatedly respond to a client’s needs while learning process-based strategies for management and adaptation.

Through the technological decisions students were required to make and the challenges presented by the production of the ejournal, students in “Publications Management” achieved the level of “critical reflection on the rhetorical and social dimensions of technology” Turnley (2007) calls for (p. 103). Through exposure to professional editors students strengthened social literacy skills, reaping the benefits that Cook outlines of learning more about organizational culture and identifying similarities and differences with professionals (p. 12-13). In short, all of the planning, marketing, editing, managing, and production activities undertaken by the student teams in the “Publications Management” course reinforced key literacies students will need to successfully transition to the professional roles they will play in the future. The integration of Xchanges-journal production into this course has enabled us to further our Technical Communication program’s goals as well as satisfy the overall goal articulated repeatedly by our field’s educators and practitioners of helping students gain practical experience and successfully transition to professional settings.
References


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Three Types of Children’s Informational Web Sites: An Inventory of Design Conventions
Hanna Jochmann-Mannak, Leo Lentz, Theo Huibers, and Ted Sanders

Abstract

**Purpose:** Research on Web design conventions has an almost exclusive focus on Web design for adults. There is far less knowledge about Web design for children. For the first time, an overview is presented of the current design conventions for children’s informational Web sites.

**Method:** In this study a large corpus of 100 children’s international, informational Web sites from four different domains (science, pets, arts, and health) is analyzed. The instrument for analyzing the Web sites included categories on visual design, navigation and information architecture.

**Results:** The design conventions identified in this study show that designers of children’s informational Web sites often follow general Web design guidelines. This study also shows that there is still much confusion about how to design Web sites for children. A closer look at the data revealed three categories of informational Web sites especially designed for children, diverging from a classical to a playful design approach.

**Conclusion:** An overview is presented of the current design conventions for children’s informational Web sites. The identified design conventions should be further tested and validated as design standards for children’s informational Web design. Further, the design of children’s informational Web sites is determined by two dimensions of aesthetics; classical and expressive. In this study, expressive aesthetics results in playful visual design or in a total playful interaction design. The effects of playful design on children’s affect and cognition will be an important topic in future research on children’s digital search behavior.

**Keywords:** interface design, Web design conventions, children, information architecture, user experience

Practitioner’s Takeaway

- Designers of children’s Web sites can consider the design options from the list of identified design conventions in this study to support children in effective information-seeking.
- Playful Web design emerges in the field of children’s informational Web sites as an interesting design option, both in visual design and navigation design.
- Playful Web design might not have designers’ intended effects on perceived hedonic (affective) and pragmatic (functional) quality and on children’s cognitive and affective states toward informational Web sites.
Introduction

Children are one of the fastest growing groups of Internet users in the United States and Europe (NielsenWire, 2009). With this development, the amount of Web sites especially designed for children also increases rapidly. Despite the growing body of research on children's search behavior (Bilal, 2001; Borgman, Hirsh, Walter, & Gallagher, 1995; Druin, 2003; Hutchinson, Druin, Bederson, Reuter, Rose & Weeks, 2005; Large & Beheshti, 2002; Schacter, Chung, & Dorr, 1998), it is not clear whether design conventions that are used for adult users, are also suited for children's interactions with Web interfaces. Before conducting research on the question what design conventions are suited for children, we first felt the need to identify the current conventions used in informational Web sites for children. Therefore, in this article the state of the art in children's informational Web sites is presented.

At the moment, there is no clear set of heuristics that can guide the design and evaluation of children's Web sites. Web design for children is mostly based on 'myths' about what children prefer and what is easy for them to use. Most of these myths are not based on research, but are a projection of adults' visions about children's preferences. Often, adult content is taken and made 'childlike' by simplifying the content and by adding more visual design and multimedia (Nielsen & Gilutz, 2002).

Nielsen and Gilutz (2002) do propose a set of guidelines for children's Web design, but many of the guidelines appear to be quite similar to standard Web design practices for adult Web sites (Markopoulos, Read, MacFarlane, & Hoysniemi, 2008). Meloncon, Haynes, Varelmann, and Groh (2010) recommend a set of guidelines to direct the design process for children's Web sites by conducting a usability test of an educational Web site for children. Because of the few published resources with an exclusive focus on children, they supplemented the available resources about Web design for children with basic adult guidelines from Spyridakis (2000) and Krug (2006). The adult guidelines that were used were tested and validated in their study with children.

Users rapidly become accustomed to prevailing design standards and conventions. Therefore, when users arrive at a Web site, they assume it will work the same as other sites (Nielsen & Loranger, 2006). For this reason, guidelines for Web design should have a close relation to the actual practice of Web design. However, there is no widely accepted notion of what the genre of children's informational Web sites for children between 7 and 12 years old looks like. In this article we present the results of a corpus analysis of 100 children's informational Web sites. Our aim is to make an inventory of the conventions used for children's informational Web sites. The main question that will be answered is: what does the genre of children's informational Web sites look like? This question will be answered through a corpus analysis that identifies the current conventions used in informational Web sites for children.

Besides studying the overall design characteristics from the corpus, a closer look was taken at subsets of the corpus. We discovered three different types of children's informational Web sites. The design characteristics of these different types will be described in more detail. We will discuss whether these design characteristics are relevant to children's cognitive development and their needs and preferences. We expect these insights to be of value for future research on design characteristics that do or do not support children's interaction with informational Web sites. Before presenting the results of our corpus analysis, we will first discuss literature about why children are different thinkers than adults and the implications of children's cognitive development for their interaction with different Web design characteristics. The identified Web design conventions for children in this study can be addressed in light of these implications.

Children's Cognitive Development in Relation to Design

Early developmental psychologists, such as Piaget (1964), Vygotsky (1962) and Bruner (1966), stated that children are a fundamentally different kind of thinkers than adults. Carey (1988) reports two arguments why children are fundamentally different thinkers according to these early developmental psychologists. 1) Children differ from adults in the kind of concepts they can represent mentally (conceptualization) and 2) children cannot think about their mental representation (meta-cognition).
1. Young children are already capable to categorize concepts on the basic level of abstraction (for example, dog), but have more difficulties with understanding concepts on superordinate levels with a higher level of abstraction (for example, animal). Logic of classes and taxonomic classification (for example, animal – dog – Terrier) come at a later age above the age of seven with children (Bilal & Wang, 2005; Siegler, 1991). For children's interaction with digital environments, this may imply that children have more difficulties browsing through abstract main categories than through main categories on a basic level of abstraction (for example, children might find it difficult to search for ‘chameleons’ or ‘lizards’ in the category named ‘reptiles’).

2. Later developmental psychologists, such as Siegler (1991), Carey (1988) and Brown and DeLoache (1978), argue that by far the most important source of variance for cognitive tasks is in domain-specific knowledge. When faced with a new type of problem, everyone is a novice, both children and adults. Novices often perform inefficiently, because they lack skills, but also because they lack self-conscious participation and self-regulation of their actions (Brown & DeLoache, 1978). Children experience this far more often than adults, because they are ‘universal novices’; most tasks they have to conduct are new to them (Brown & DeLoache, 1978). Children experience this far more often than adults, because they are ‘universal novices’; most tasks they have to conduct are new to them (Brown & DeLoache, 1978). While conducting memory or problem-solving tasks, children often fail to check and monitor their activities and fail to make their own task analysis. This monitoring is termed meta-cognition: the voluntary control an individual has over his own cognitive processes. To build up knowledge and to adopt self-regulation strategies, children need experience.

Next, the implications of children's cognitive development are discussed for their interaction with different types of Web design for children, such as scanning, searching and browsing.

**Scanning**

A relevant task for digital information-seeking that is described by Brown and DeLoache (1978) is the task of visual scanning. Young children are not yet able to coordinate and control their scanning activities, but children's scanning skills gradually become more systematic. The older the child, the more likely he will fixate on features that are relevant to his goal. Younger children have difficulties ignoring irrelevant features. The younger the child, the more attention he is likely to give to stimuli that are irrelevant to the original task. The implication for their interaction with digital environments may be that children will have more difficulties to fixate on relevant items, when the screen is filled with irrelevant visual features. The process of scanning is a natural response that does not develop itself. What develops is the ability to control and coordinate this scanning process to use it as a strategic action (Brown & DeLoache, 1978).

**Searching**

Young children get distracted very easily and can forget their initial search goal while searching. When children grow up, their search strategies become more sophisticated. Their attempts become more systematic and efficient and their strategic use of cues for retrieval improves with age. The implication for searching in digital environments is that younger children especially need clear cues to help them search and that distractions should be limited.

External retrieval is easier than internal retrieval, because internal retrieval (that is, scanning your own memory), requires a higher degree of cognitive control to initiate and maintain the cognitive orientation to the relevant information in memory. When some kind of structure is provided, which is the case with external retrieval, a child will perform much better than when he must make up that structure for himself (Brown & DeLoache, 1978). The implication for searching in a digital environment is that, from a cognitive perspective, children may have more difficulties with keyword searching than adults. For ‘retrieving’ a relevant query from memory, the child needs a higher degree of cognitive control and orientation than for ‘browsing’ through provided categories.

Other reasons why children experience difficulties with keyword search are that children have less knowledge to base ‘recall’ on than adults (Borgman et al., 1995; Hutchinson et al., 2005) and that they rarely access their previous knowledge of the topic during formulating search queries (Schacter et al., 1998).
probably because they do not know that they have to
access this knowledge, because they lack metacognitive
skills through their inexperience with these types of tasks.
They also do not have a very developed vocabulary as
adults do and they have difficulties with correct spelling,
which is needed for most search engines to find relevant
search results. Also, moving from natural language to
a single keyword is more difficult for children than for
adults (Rowlands, 2008). Still, while keyword searching
is more difficult for children than browsing from a
cognitive perspective, children seem to prefer keyword
search over browsing (Bilal & Watson, 1998; Druin,
Hutchinson, Foss, Hatley, Golub, Leigh Guha, & Fails,
2009; Large, Beheshti, & Moukdad, 1999).

browsing
browsing categories should be less difficult for children
than keyword search, because some kind of structure
(for example, a row with main categories) is provided.
however, browsing can also be more difficult for
children than for adults. As already mentioned at the
beginning of this section, children have difficulties to
understand and select abstract terms; browsing tasks
are more successful when concrete categories are used
(Borgman et al., 1995) and children find it easier to
retrieve concrete terms than abstract terms (Bar-Ilan &
Belous, 2007). Again, children can also have trouble
understanding categories and finding the right category
because they have less domain knowledge and less
vocabulary knowledge than adults (Bar-Ilan & Belous,
2007; Borgman et al., 1995). Also, the amount of
categories is important. Cognitive load increases with
the number of categories that need to be processed.
The more categories to choose from, the more difficult
it is for a child to choose the right category. Further,
we expect children to use a trial-and-error navigation
strategy more often than adults, because children’s meta-
cognition is not fully developed (Brown & DeLoache,
1978). This is because children have less control over
their own cognitive processes and less ability to monitor
and reflect on their choices.

from the results of the corpus study, we will discuss
which aspects of digital interfaces might be supportive
for children's cognitive skills and which aspects might
cause problems for the search processes discussed in this
section, such as browsing categories, scanning Web pages
and searching information using keywords.

method
for the corpus analysis, 100 Web sites were selected to
form a representative corpus for children’s Web sites in
general. For the Web site selection and analysis, children’s
scenarios were developed for informative Web sites (De
Jong & Lentz, 2006). These scenarios were based on
four contexts that are common in children’s lives. When
relevant information concerning these scenarios could be
found on or through a Web site (for example, through
a directory or search engine), we included this Web site
in the corpus. We chose to analyze the Web sites on the
basis of these scenarios and not by looking at the Website
when filling in the coding scheme (heuristic analysis),
that will be discussed later in this section. searching for
relevant information is more representative for real Web
site use than just ‘looking around.’

Corpus of Web Sites

content. The intended communicative effect of the
Web sites had to be informational (and not advertisement
or entertainment). Web sites were considered as
informational and were selected for our corpus when one
of the four scenarios presented in the next section could
be performed on the Web site and relevant information
could be found as an answer to the search question. Also
search engines or directories were included when relevant
information for the scenarios could be found through
these search engines or directories.

Audience. Web sites were aimed at children in the
age category from 7 through 12 years old. Most Web
sites mentioned on what age category the Web site is
aimed in the ‘About us’ section. We also included Web
sites that were aimed at a broader age category than
7 through 12 years old (for example, also for younger
children or also for teenagers), because in these cases,
the Web site should also be usable for our age category.
some Web sites had different sections for different
audiences. In that case, only the section for our target
age was visited. When a Web site did not mention the
aimed age category, we checked whether words such as
‘children’, ‘child’, ‘kids’, or ‘kid’ were used on the
homepage or in the title of the Web site. When this was
the case and the Web site predominantly contained text
instead of images, then we argued that this Web site
is aimed at children in the age from 7 to 12 years old.
Children's Web Design Conventions

This is the age category in which children can read and comprehend informative texts.

Information Structure. Web sites had a minimum information hierarchy of three levels. Web sites with one navigation level were not included in the corpus (for example, the Web site fjordstone.com/kidzong). The reason for this is that these different levels provide the opportunity to navigate through a Web site from the home page with the main menu, to a subpage with a sub menu, to a text page with the relevant information. Search engines and directories are an exception in respect to this criterion, because they were also included in our corpus, although these Web sites do not have a minimum information hierarchy of three levels. These search engines and directories do not provide actual content on the Web site; they refer to other Web sites that do provide the relevant information.

Language. To develop an international corpus, Web sites were selected in three different languages that did not need to be translated for the analysis. The majority of the Web sites in the corpus is in English (80 Web sites in total). Twelve Web sites are in Dutch and eight in German. The preponderance of English Web sites in the corpus represents the preponderance of American and British Web sites in the western world in relation to German and Dutch Web sites.

Accessibility. Web sites that require registration to read content were not included in the corpus. Also, Web sites that require a download of specific software to view the contents were not included in the corpus.

Source. We chose to select Web sites from one Internet directory, DMOZ.org. This is an open source directory in which volunteers work on building the largest human-edited directory of the Web. The directory for children (The Kids and Teens Open Directory Project) has the goal to produce the most comprehensive directory of the Web for people under the age of 18, by relying on a vast army of volunteer editors. Within this directory, all Web sites are selected based on one set of criteria.

Table 1. Contexts, Domains and Scenarios for Web Site Selection

<table>
<thead>
<tr>
<th>Context</th>
<th>Domain</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Science</td>
<td>Jim wants to give a presentation for his classmates about dinosaurs and searches information on the Internet.</td>
</tr>
<tr>
<td>Home</td>
<td>Pets</td>
<td>Bob’s parents surprised him with a puppy for his birthday. He wants to know how to take care of it and searches information about puppies on the Internet.</td>
</tr>
<tr>
<td>Leisure</td>
<td>Arts</td>
<td>Emily loves to make music or listen to music and searches information about an artist or instrument on the Internet.</td>
</tr>
<tr>
<td>Hospital</td>
<td>Health</td>
<td>Rose has diabetes and wants to know more about her disease. She searches information about her disease on the Internet.</td>
</tr>
</tbody>
</table>

Coding Scheme

The corpus analysis was conducted in the spring of 2010 by four trained research assistants that received course credits for their work. Before conducting the final analysis, two pretests were conducted with five and ten Web sites respectively, in which adjustments were made to the initial coding scheme.

The assistants filled in the coding scheme in a window next to the browser window in which they analyzed the different Web sites. It took the assistants...
approximately half an hour per Web site to fill in the coding scheme. Each of the four assistants analyzed 50 Web sites from two domains, so that each Web site in the corpus was analyzed by two different assistants.

Each of the Web sites was analyzed by following the scenario that was relevant for the domain that the Web site belonged to. By following a short scenario (see Table 1), the assistants were guided to the same Web pages per Web site, which makes their evaluations of Web sites more comparable.

Inspired by the design categories used in literature on existing guidelines for Web design for both children and adults (Farkas & Farkas, 2000; Koyani et al., 2006; Meloncon, 2010; Nielsen & Tahir, 2002; Spyridakis, 2000; Williams, 2000), we developed a coding scheme for analysis of the Web sites for children in which we included the main and subcategories mentioned in Appendix 1.

For each Web site, we listed the location or presence of items on the Web page (such as the logo, the main menu, the search window, etc.), the scanability and readability of the Web pages and the type of media used (such as images, video and audio). These design characteristics of the Web sites may have implications for children's scanning behavior. We also listed the characteristics of the navigation tools and the search engine, which may also have implications for children's searching and browsing behavior.

Within the category 'visual design', three levels of Web pages per Web site were analyzed, the homepage, a sub category page and a content page.

**Inter-Coder Reliability**

To check whether the results of the four assistants were reliable, we computed the inter-coder reliability using Cohen’s kappa, which measures the amount of agreement between assistants. When kappa is above .60, there is a fair agreement between assistants. We measured Cohen’s kappa between the scores per domain for the homepages.

As can be seen in Table 2, the scores were least reliable in the Arts domain. Therefore, we took a closer look at the scores of the assistants and we found substantial disagreement between the scores of one of the assistants and the scores of the other assistants. Therefore, we decided to resolve all disagreements between assistants per domain by an independent, fifth researcher (that is, the first author).

**Table 2. Kappa Scores for Research Assistants’ Reliability**

<table>
<thead>
<tr>
<th>Domain</th>
<th>First researcher</th>
<th>Second researcher</th>
<th>Cohen’s kappa</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>A</td>
<td>B</td>
<td>.86</td>
<td>.97</td>
</tr>
<tr>
<td>Pets</td>
<td>A</td>
<td>C</td>
<td>.67</td>
<td>.89</td>
</tr>
<tr>
<td>Arts</td>
<td>D</td>
<td>C</td>
<td>.51</td>
<td>.64</td>
</tr>
<tr>
<td>Health</td>
<td>D</td>
<td>B</td>
<td>.67</td>
<td>.94</td>
</tr>
</tbody>
</table>

**Definition of Convention Levels**

According to Nielsen’s (2004) definition of standardization levels, there are not many design ‘standards’ in our corpus of children’s Web sites, as will be discussed in the Results section. According to Nielsen (2004) a ‘standard’ is when 80% or more of the Web sites use the same design approach. When 50-79% of the Web sites use the same design approach, Nielsen speaks of a ‘convention.’ When less Web sites use a particular design approach, he speaks of confusion.

For the results of our corpus analysis, we decided not to speak of ‘standards’ because the analyzed design characteristics have not been tested for their effectiveness with children in this study. However, when 80% or more of the Web sites apply a particular design characteristic, we will speak of a strong convention that seems generally accepted by Web designers. These strong conventions may well be classified as standards with additional research in which their effectiveness with children is tested.

In contrast to Nielsen (2004), we will not speak of a convention when only half of the Web sites presented a particular design characteristic. We set the minimum to speak of a conventional characteristic at 60% because the characteristic would then be represented by a reasonable majority in the corpus.

**Data Analysis**

After identifying the current conventions used in informational Web sites for children, the next question that we wanted to answer is whether we can identify relevant subgroups of types of children’s Web sites in the corpus. We do not have clear hypotheses about which types of children’s Web sites we expect to identify in the corpus. Therefore, instead of using the data to test hypotheses on a theory in advance, we made use of Strauss and Corbin’s ‘Grounded Theory’ (Strauss &
Corbin, 1990). This is a method in which the theory is inductively developed from the data. The method exists of several stages in which the researcher works from specific 'codes', through 'concepts' and 'categories' to a general 'theory.'

The interpretative process was started by collecting the data set by filling in the coding scheme described earlier in this section ('codes') and conducting a hierarchical cluster analysis on the collected data to explore what cases (that is, Web sites) formed groups because of similarity on a set of variables. For this cluster analysis, Ward’s method was used with a binary Squared Euclidian distance measure, because the data set exists of binary codes (ones and zeros). Web sites that were coded the same for a large number of characteristics in the coding scheme formed clusters of Web sites in the output of the hierarchical cluster analysis (see Appendix 2).

In the first part of this section, results will be described for the total corpus. In the second part, results are presented for the different groups of Web sites that could be identified through hierarchical cluster analysis. According to our definition of convention levels, we could identify ten moderate design conventions (60%-80% occurrence) and five strong design conventions (occurrence of 80% or more) in the corpus. In Figure 1, the Web site Kids.gov is presented in which all design conventions are present that will be discussed in this section.

4. Mouse-over markings of hyperlink click-ability
1. Main menu available as the primary navigation tool
2. Short texts
3. High contrast between text and background
5. Normal font type and font size

Figure 1. Example of a Web Site that Represents All Conventional Web Design Characteristics for Children’s Informational Web Sites Mentioned in Table 3 and Table 4
Strong Design Conventions

First, the strong conventions for children’s Web site design will be presented in Table 3 after which they will be discussed in this section.

Table 3. Strong Design Conventions

<table>
<thead>
<tr>
<th>Strong design conventions for the total of 100 Web sites</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Main menu available as the primary navigation tool</td>
<td>98%</td>
</tr>
<tr>
<td>2. Short texts</td>
<td>93%</td>
</tr>
<tr>
<td>3. High contrast between text and background</td>
<td>91%</td>
</tr>
<tr>
<td>4. Mouse-over markings of hyperlink click-ability</td>
<td>84%</td>
</tr>
<tr>
<td>5. Normal font type and font size</td>
<td>82%</td>
</tr>
</tbody>
</table>

Main Menu as the Primary Navigation Tool. Almost all Web sites provide a main menu on the homepage as the primary navigation tool that exists of a set of horizontally or vertically aligned hyperlinks, both through texts with or without icons (98%). There is no conventional location for the main menu; about one third of the main menus is presented horizontally at the top, one third as a navigation rail at the left and one third through categories in the middle.

Presentation of Short Texts. Most Web sites in the corpus present short texts on the homepages and following navigation pages, with a maximum of approximately 50 words per text block (93%). These high percentages of short texts correspond with Nielsen’s guideline to “minimize the amount of text on screens” (Nielsen & Gilutz, 2002). Nielsen says: “Long pages of text frightened users away, even if they were interested in the content.”

High Contrast between Text and Background. For most homepages in the corpus the contrast between text and background is high (91%). This standard of high contrast corresponds to Nielsen’s guideline to “place text on solid background, because users’ reading slowed down substantially when images were overlaid with text, whether tiled or one-picture backgrounds were used” (Nielsen & Gilutz, 2002).

Mouse-Over Markings of Hyperlink Click-Ability. Most Web sites present hyperlinks that are marked as clickable when hovered over by a mouse (84%), for example, by appearance of underlining, altering of the color, or movement (animation) of the link label. This convention corresponds to Nielsen’s guideline to ‘make clickable items look clickable’ and ‘add simple visual rollovers to images that can be clicked’ (Nielsen & Gilutz, 2002).

Normal Font Type and Size. Most Web sites (82%) present a ‘normal’, highly readable font, such as Arial or Verdana and a font size of approximately 10-12 points. These results correspond to Nielsen’s guideline that recommends for children’s Web site design to use simple, relatively large fonts and to avoid using animated text.

Moderate Design Conventions

In Table 4, the ten Web site characteristics are summed up in order of frequency that are ‘moderate conventional’, which means that they occur on 60%-80% of the Web sites in the corpus.

Table 4. Children’s Design Conventions

<table>
<thead>
<tr>
<th>Design conventions for the total of 100 Web sites</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Service links located horizontally at the bottom of the page</td>
<td>77%</td>
</tr>
<tr>
<td>2. Search engine available</td>
<td>72%</td>
</tr>
<tr>
<td>3. Ordered page layout (no clutter)</td>
<td>70%</td>
</tr>
<tr>
<td>4. Menu presented with text labels (no icons)</td>
<td>70%</td>
</tr>
<tr>
<td>5. Solid background color</td>
<td>69%</td>
</tr>
<tr>
<td>6. Logo located at the top left corner of the page</td>
<td>67%</td>
</tr>
<tr>
<td>7. Separate home button available (apart from logo)</td>
<td>67%</td>
</tr>
<tr>
<td>8. Hyperlinks clearly marked as clickable (without mouse-over)</td>
<td>67%</td>
</tr>
<tr>
<td>9. Logo functions as a home button</td>
<td>64%</td>
</tr>
<tr>
<td>10. Substantial use of graphics</td>
<td>63%</td>
</tr>
</tbody>
</table>

Service Links Located Horizontally at the Bottom of the Page. On most homepages the service links such as ‘contact’, ‘help’ and ‘disclaimer’, are presented horizontally at the bottom of the page (77%).
Children’s Web Design Conventions

**Search Engine Availability.** A search engine is available on 72 of the 100 Web sites, which makes the availability of a search engine moderate conventional. This is in contrast to Meloncon’s (2010) recommendation not to include a search option on a Web site for children, because “children have not yet fully developed the intellectual ability necessary to generate relevant search terms (Druin et. al., 2009). In addition, giving children the option to search would undermine the process of having them read through the information and explore the Web site (Bilal, 2001)”. However, because Meloncon et al. (2010) did not include a search engine on their research Web site, their study could not confirm or weaken these mentioned problems with a search engine for children.

The conventions of the search engine characteristics were computed separately (over a total of 72 Web sites) and summed up in Table 5. Only moderate design conventions were found for search engine design.

The presentation of a summary of the search results’ content is not conventional. Also, the presentation of a picture in front of each search result is not conventional in the corpus. Furthermore, query formulation support is very rare in the corpus, with only 21% of the search engines that provide spelling suggestions when a query is spelled incorrectly (for example, Google’s ‘Did you mean’).

We think that these results are surprising, because a summary might support children better than the presentation of a snippet of the content. Also, a picture might support children’s use of search results, because of children’s preference for images. Absence of spelling suggestions is remarkable, because spelling causes the most problems for children’s key word searching (Borgman et al., 1995; Druin et al., 2009).

<table>
<thead>
<tr>
<th>Table 5. Children’s Search Engine Conventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventions for the total of 72 search engines</td>
</tr>
<tr>
<td>1. Results pages offer opportunity of paging search results</td>
</tr>
<tr>
<td>2. Results pages present a maximum of 10 results per screen</td>
</tr>
<tr>
<td>3. Search engines offer internal search results (instead of external search results from other Web sites)</td>
</tr>
<tr>
<td>4. Search engines accept natural language queries</td>
</tr>
</tbody>
</table>

**Ordered Page Layout.** Of the Web sites in the corpus, 70% were evaluated as ordered and not as ‘cluttered’. Clutter is when excess items, on a page, such as many graphics, objects and animations, lead to a degradation of performance when trying to find certain information (Koyani et al., 2006). General guidelines for page design recommend avoiding cluttered pages, because it decreases usability of the page (Lazar, 2006). Especially younger children have difficulties to ignore irrelevant features. When a Web page is cluttered and filled with irrelevant visual features, children will have more difficulties to fixate on relevant items (Brown & DeLoache, 1978 about ‘visual scanning with children’).

**Menus Presented with Text Labels.** Most Web sites present menus with sole text labels (70%). Only a subset of Web sites presents menus with text labels that are accompanied by icons or menus with icons as hyperlinks without text labels.

**Solid Background Color.** Most homepages in the corpus (69%) present a solid background, which means that the background consists of one plain color. These findings correspond to Nielsen’s guideline to place text on a solid background (Nielsen & Gilutz, 2002).

**Logo Located at the Top Left Corner of the Page.** Research on design standards for company Web sites found that 90 to 100 percent of the pages place the organization’s logo in the top left of the page (Adkisson, 2002; Jones & DeGrow, 2011). Also, 84% of the Web sites in Nielsen’s study (Nielsen & Tahir, 2002) placed the logo at the top left, which makes it a general Web design standard according to Nielsen. Surprisingly, this location is not a strong convention for children’s Web sites, because only on 67% of the homepages in the corpus the logo can be found in the top left corner. The second occurring location is in the top center of the page (20%).

**Separate Home Button Available.** The availability of a separate home button was found to be moderate conventional for children’s Web sites (with 67% of the Web sites). This is an important design characteristic for children, because they tend to go back to the homepage when they start a new search task or when they get lost of track on their current search task.

**Hyperlinks Clearly Marked as Clickable.** Marking hyperlinks as clickable (without having to mouse-over) is moderate conventional in the corpus, because two third of the Web sites (67%) present clear hyperlink markings. Markings of click ability are
underlinement, presentation of a button or presentation of a different colored shape.

**Logo Functions as a Home Button.** Of the Web sites in the corpus, 64% presented a logo that also functions as a home button. It is a general guideline for adults that the logo should be a link to the homepage (Nielsen & Tahir, 2002). Only five Web sites in the corpus do not present a home button at all on the Web site.

**Substantial Use of Graphics.** About two third of the homepages in the corpus (63%) presents a substantial amount of images. One third of the homepages in the corpus presents only small amounts of images or no images at all. A remarkable finding is that the content pages contain fewer images than the navigation and homepages and that the homepages include most images. This seems to indicate that designers want the homepages to be most attractive for children. This substantial use of graphics does not correspond to the use of graphics on Web sites in general, because both Nielsen and Tahir (2002) and Jones and DeGrow (2011) found less use of pictures in their corpora of Web sites aimed at adults. In other words, it seems that designers for children's Web sites tend to use more images than designers of Web sites for adults.

**Conclusion about Design Conventions for Children**

Many design conventions for children's Web sites found in this corpus study correspond with guidelines and conventions for general Web design. This is not very surprising, because these conventions are often known as general guidelines for Web design and because so few guidelines exist for children's Web sites. Therefore, it is likely that developers of children's Web sites often follow general design guidelines when designing Web sites for children. This does not mean that these conventions should automatically be seen as guidelines for children's Web design, because more research is needed to test whether these design conventions are suitable for children's search behavior on informational Web sites.

However, these identified conventions only represent a part of the analyzed characteristics in the corpus analysis. In the next section, a closer look is taken at the data from the corpus, to discover whether there are systematic differences for different groups of children's Web sites. These groups may partly share design characteristics with the total corpus, but may also share characteristics that are specific for a subset of children's Web sites.

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**Results Part 2: Categorizing the Corpus in Three Types of Children's Web Sites**

In this section, the results of the hierarchical cluster analysis will be discussed to identify different categories of children's informational Web sites. The output of the hierarchical cluster analysis is presented in a dendrogram in which we set a minimum of ten Web sites per group (see the ‘group identifier’ in Appendix 2). In that way, five groups of Web sites were identified from the data (‘concepts’). From these five groups, three groups clearly represented different categories of children's informational Web sites. Two groups did not clearly represent a category and were therefore left out of consideration. There were no singletons in the data set, which means that there were no Web sites that did not belong to any of the five groups.

The three groups that clearly represented different categories of children's informational Web sites, were named: 1) Classic Web sites, 2) Classical play Web sites and 3) Image map Web sites. In this section, we will describe the specific design characteristics of these three groups of Web sites and we will explain why we suggest the three mentioned names for the groups. The description of these categories may lead the way to a general ‘theory’ about the design of children's informational Web sites.

**Classic Web Design for Children**

The largest group of Web sites in the corpus (37 Web sites, group A in Appendix 2) follows guidelines for basic Web design, termed ‘Classic Web sites’. According to the literature, the concept of ‘Classic Web design’ aims at simplicity, consistency and focus in Web design. The layout of the pages on such Web sites is kept minimal; key elements of the pages are the center of attention and different pages have the same layout as recommended by Brinck et al. (2002). Page components are located on conventional locations as recommended in the literature on usability guidelines for Web design (Koyani et al., 2006; Nielsen & Tahir, 2002).

Many of the Classic Web sites in the corpus present a directory of main categories through which the user can browse to relevant information. This can be seen, for example, on the homepage of Dibdabdoo.com (see Figure 2), which is a good example of a typical
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Classic Web site. In Table 6, the strong and moderate conventional characteristics are presented for the Classic Web sites. Characteristics that are conventional for all Web sites in the corpus are not presented, because they were already discussed in the previous section.

**Figure 2. Example of a Classic Web Site for Children from Dibdabdoo.com**

<table>
<thead>
<tr>
<th>Table 6. Conventions for Children’s Classic Web Design (N=37)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong conventions</strong></td>
</tr>
<tr>
<td>Ordered pages (no clutter)</td>
</tr>
<tr>
<td>Solid backgrounds</td>
</tr>
<tr>
<td>Consistency in menu structure</td>
</tr>
<tr>
<td>Pages with low screen density</td>
</tr>
<tr>
<td>Link labels only presented with text</td>
</tr>
<tr>
<td>Consistency in layout</td>
</tr>
<tr>
<td><strong>Moderate conventions</strong></td>
</tr>
<tr>
<td>Search engine availability</td>
</tr>
<tr>
<td>Main menu on a conventional location (at top or left of page)</td>
</tr>
<tr>
<td>Low use of graphics</td>
</tr>
<tr>
<td>Low use of animations</td>
</tr>
<tr>
<td>Clear (non-ambiguous) main categories</td>
</tr>
</tbody>
</table>

**Clean and Ordered Design.** The Classic Web sites in our corpus are characterized by a solid background color (mostly white), little clutter on the pages and low screen density. ‘Density’ is the percentage of the screen filled with text and graphics. Web sites with a lot of ‘empty space’ have a low screen density. Children will not get lost easily on the Classic Web sites, because of the consistent menu structure and layout throughout the Web sites. Common elements, such as the logo or the main menu are located on a conventional location on most of the Classic Web sites. This clean and ordered page design might support children to coordinate and control their scanning activities because there are no irrelevant distracting visual features.

**Low Use of Multimedia.** The Classic Web sites contain low amounts of images and animations. The same counts for the use of video and audio, which is also very limited on the Classic Web sites. The perceived hedonic quality of these Web sites might therefore be low. Children might not be stimulated by the Web sites because of lack of originality, creativity and excitement of visual features such as pictures and animations. Therefore, the Web sites might be experienced as ‘boring’ by children, because of the small amount of pictures and illustrations.
Classical Play for Children
A second category of children’s Web sites that was discovered in the data is termed ‘Classical play.’ With these Web sites a classic design approach is combined with a playful, visual design approach. This was already recommended by Harbeck and Sherman (1999): children’s Web sites should be simple, clean and concrete, yet also active and enjoyable. A ‘playful approach’ means that more effort is spent on the design of graphics, color, and games (Meloncon et al., 2010).

These ‘Classical play Web sites’ (14 Web sites in the corpus; group B in Appendix 2) share characteristics with both the Classic Web sites and the Image map Web sites. They are characterized by a traditional arrangement of information, just like the Classic Web sites, but share a playful approach with the Image map Web sites, which will be described in the next section. In Table 7, the conventional characteristics are presented for the Classical play Web sites.

A good example of a ‘Classical play’ Web site is BAM.gov (see Figure 3), a Web site of the Department of Health and Human Services of the US Government, especially designed for children, with substantial amount of graphics, animations and colors.

Table 7. Conventions for Classical Play Web Design (N=14)

<table>
<thead>
<tr>
<th>Strong conventions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High amount of graphics</td>
<td>100%</td>
</tr>
<tr>
<td>Animations presented</td>
<td>100%</td>
</tr>
<tr>
<td>Link labels presented with text and icons</td>
<td>100%</td>
</tr>
<tr>
<td>Clear main categories</td>
<td>100%</td>
</tr>
<tr>
<td>Focal point available</td>
<td>93%</td>
</tr>
<tr>
<td>Logo as home button</td>
<td>93%</td>
</tr>
<tr>
<td>Consistency in menu structure</td>
<td>93%</td>
</tr>
<tr>
<td>Consistency in layout</td>
<td>86%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moderate conventions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main menu on a conventional location (at top or left of page)</td>
<td>79%</td>
</tr>
<tr>
<td>Search box at top right of page</td>
<td>79%</td>
</tr>
<tr>
<td>Pages with high screen density</td>
<td>64%</td>
</tr>
<tr>
<td>Playful fonts</td>
<td>50%</td>
</tr>
</tbody>
</table>

Use of Multimedia. All Classical play Web sites present a substantial amount of images. Large et al. (2002) report that children respond positively towards pictures and that children are critical about Web sites that do not present pictures. However, they also say that children appreciate pictures, when they add value to the content, for example to illustrate something.

All homepages in this group include animations. The use of animations is an important contribution to the playful character of the Web sites, because motion is an extraordinarily compelling visual quality that attracts the user’s attention (Williams, 2000). However, children might also experience difficulties with scanning and parsing Web pages that are presented with a lot of visual features. Fixating on relevant items on such Web pages becomes more difficult for children when the screen is filled with distracting visual features.

Also, some Web sites in this group make use of audio (6 of 14 Web sites). Some Web sites present sounds when users hover over hyperlinks. Nielsen and Gilutz (2002) report that children appreciate that kind of sounds: “Adding audio rollovers provides an experience enhancement that kids enjoy, especially if the sounds are funny.”

Icons as Menu Labels. All Web sites in the Classical play group present menu labels accompanied by icons. Most of these Web sites (93%) present icons...
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that are meaningful, which means that it is clear right away what category the icon stands for.

Consistency and Main Categories. Menu structures and layout on the Classical play Web sites are consistent throughout the pages, which supports children’s navigation and orientation. Also, the main categories on all Web sites are scored as concrete, which means that the assistants had the right expectation of the information that could be found after selecting the categories. As discussed in the section about children’s cognitive development, children have difficulties with browsing through abstract categories. Because of the concrete main categories, difficulties with browsing categories will be limited with the Classical play Web sites.

Conventional Location of Common Elements. Many items on the Classical play Web sites are presented on conventional locations. The logo is mostly presented in the top left corner of the page, which is also a home button for almost all Web sites in this group. The main menu is presented horizontally at the top of the page (as can be seen on the homepage in Figure 3). The search box is mostly presented at the top right corner of the page and the service links horizontally at the bottom of the page as a navigation footer. These conventional locations of items can also be seen on the homepage in Figure 3. Another common characteristic of this group of Web sites is the presentation of a clear focal point on the page, often in the form of an image or animation, which immediately draws the user’s attention. In Figure 3, the picture with ‘smile style’ is an example of such a focal point.

Image Map Web Sites for Children

In the third group, which consists of 15 Web sites in the corpus (group C in Appendix 2), no classic Web design characteristics are used. The visual design and navigation of the Web sites in this group are based on Image maps that incorporate objects or locations that children know from real life or from fiction. The child can explore a tableau of real life or fictional objects in search of specific information. This makes information-seeking a playful experience. Meloncon et al. (2010) also made use of Image maps for navigation in their educational Web site for children.

The Image maps might support children in using a system that is new to them. They can relate to an environment that they already know, which makes it more intuitive for the child to navigate and manipulate within this space (Barfield, 2004). Examples of such Image maps are a concert hall (The New York Philharmonic Kidzone), a tropical island (BR-Kinderinsel), a school bus (The Magic School Bus) or a space shuttle with planets (Kids Health Galaxy.com; see Figure 4). In Table 8, the conventional characteristics are presented for the Image map Web sites.

Figure 4. Example of an Image Map Web Site on Kids Health Galaxy.com

Table 8. Conventions for Image Map Web Design for Children (N=15)

<table>
<thead>
<tr>
<th>Strong conventions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High amounts of graphics</td>
<td>100%</td>
</tr>
<tr>
<td>Use of animations</td>
<td>93%</td>
</tr>
<tr>
<td>Non-solid backgrounds</td>
<td>80%</td>
</tr>
<tr>
<td>Separate home button</td>
<td>80%</td>
</tr>
<tr>
<td>Image map navigation</td>
<td>80%</td>
</tr>
<tr>
<td>Consistency in layout</td>
<td>80%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Moderate conventions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of audio</td>
<td>60%</td>
</tr>
<tr>
<td>Consistency in menu structure</td>
<td>60%</td>
</tr>
</tbody>
</table>
Use of Multimedia. The amount of multimedia use is high on these Web sites. Almost all of these Web sites present a screen-filling graphic and make use of animations. Also, many of these Web sites make use of audio, such as the spoken introduction by the character ‘Joey’ in Figure 4.

Page Layout. On most of the Web sites in this group, the logo is not a home button. Instead of that, a separate home button is often provided on these Web sites. The main menu and the search box are mostly included in the visual metaphor on a non-traditional location. In 80% of the cases, the background on these Web sites is non-solid because of the visual metaphor that covers the entire screen. Many of these Web sites also make use of playful fonts.

Icons as Category Labels. Some Image map Web sites present icons as category labels without textual labels. Textual labels appear with these items when the user hovers over them with the mouse, called ‘mine sweeping’. Nielsen found that children like to mine sweep pages in search for hyperlinks (Nielsen & Gulitz, 2002). However, the results of an explorative study on children’s search behavior demonstrated that children experienced substantial problems with such a mine sweeping navigation tool (Jochmann-Mannak, Lentz, Huibers & Sanders, 2010).

Search Engine Availability. Remarkably, the amount of Web sites with a search engine is lowest on the Image map Web sites. An explanation might be that these Web sites are especially aimed at ‘exploring’ the Web site in search of information. As discussed in the section about children’s cognitive development, the emphasis on browsing categories instead of keyword search might have a positive effect on children’s search performance, because of the lower cognitive load of browsing categories compared to keyword searching.

Groups of Web Sites Left out of Consideration

Two of the identified groups from the hierarchical cluster analysis are not addressed as specific categories of children’s informational Web sites and left out of consideration in this article. The Web sites in these two groups shared a design approach that did not clearly point at a clear category. The first of these two groups can be characterized by cluttered pages, high density and a lot of textual elements. It seems like the designers of these Web sites tried to put as many information on one page as possible. Regarding the graphical character of these Web sites, they relate to the Classical play Web sites, but they are too crowded for this group of Web sites. The second group that is left out of consideration can be characterized as poorly organized, with little consistency in menu structure and layout and scarce use of orientation cues. Thus, we do not claim that all children’s Web sites can be categorized in the three main design categories that have been described in this section.

Conclusion: Three Types of Children’s Web Sites

In this section, three categories of children’s Web sites were identified in the corpus of children’s informational Web sites, which differ in the amount of playfulness added to the Web pages. No playful features are added to the Classic Web sites. The Classical play Web sites are only playful in visual appearance. On the Image map, the total interaction design is playful. On these Web sites, there are not only visual playful features, but also functional playful features (for example, navigation tools).

Conclusion and Discussion

The results of this corpus study indicate that most design conventions that were identified in the corpus of children’s informational Web sites, correspond to general Web design guidelines. These conventions were not tested and validated as standards for children’s Web design in this study. However, most of the identified conventions correspond to the literature about how children interact with Web sites (Meloncon, 2010; Nielsen, 2002). Design conventions such as use of short texts, high contrast between text and background, marking of hyperlink click ability, conventional location of items as the logo (top left of page) and service links (bottom of page), ordered page layout, a solid background and a consistent layout through the Web site are not only proved helpful for adults, but also for children.

Still, many Web sites in our corpus have design characteristics that do not belong to a set of general accepted design conventions. Apparently, designers often do not agree about what kind of design characteristics are suited for children’s search behavior. For example, 58% of the Web sites required scrolling up and down the page to view all information available. Meloncon et al. (2010) do not provide conclusive prove in their
study about children’s preferences regarding page length and their willingness to scroll, while Nielsen (2002) recommends no scrolling on Web pages for children. Further, the labels of the main categories were analyzed as ‘vague or ambiguous’ on 42% of the Web sites. Also, a third of the Web sites uses a non-solid background, which is a risk for a children’s Web site, because reading and scanning slows down substantial when the background is filled with images (Nielsen, 2002).

Furthermore, almost a third of the Web sites (30%) was analyzed as being ‘cluttered’ and on 41% of the Web sites the pages were characterized as having a high density. Children will have more difficulties to fixate on relevant items on these cluttered pages, because the younger the child, the more attention he is likely to give to stimuli that are irrelevant to the original task (Brown & DeLoache, 1978).

Most of the Web sites in the corpus do not offer orientation cues, such as marking of the current location in the menu (only 37% of the Web sites), marking the color of the page as orientation cue (23% of the Web sites), or by offering a navigation path or breadcrumb trail (23% of the Web sites). This could also cause problems for children while searching information on a Web site, because children’s meta-cognitive control is still in development. Therefore, they have problems in monitoring their location in the Web site.

More research is needed to validate the design conventions as guidelines for children’s informational Web sites and to find out in what way design characteristics that are not clearly conventional from this study, are suited for children’s search behavior.

Types of Children’s Informational Web Sites

Lavie and Tractinsky (2004) examined user’s perceptions of Web site aesthetics and found two main dimensions of aesthetics: classical aesthetics and expressive aesthetics. They found that classical aesthetics are characterized by clear and orderly design and are closely related to general design rules. This characterization of classical aesthetics corresponds to the category of Classic Web sites in our corpus, which are classic in both visual design and in navigation structure. By contrast, expressive aesthetics can be characterized by creativity and originality and by the ability to break design conventions, which corresponds to the more playful Web site categories. The Classical play Web sites are expressive in visual design through presentation of many colors, images and animations, but the navigation structure of these Web sites follows classical aesthetics. The Image map Web sites are expressive in both visual design and in navigation structure. With a playful navigation structure, for example, there is no textual menu, but the user has to ‘mine sweep’ through visual elements in search of a relevant category.

Other research reports that interactive products are perceived and evaluated along two different dimensions: pragmatic and hedonic quality (Hassenzahl, Schöbel, & Trautmann, 2008; Van Schaik & Ling, 2008). Pragmatic quality refers to the perceived functional abilities of the Web site to achieve do-goals, such as ‘finding information for a school assignment’. In contrast, hedonic quality refers to the perceived pleasure-producing qualities of the Web site to achieve be-goals, such as ‘being special’, or ‘being related to a particular group’. Two forms of hedonic quality are stimulation (for example, the product is original, creative, innovative or exiting) and identification (for example, the product is integrating, professional, inclusive or presentable). The variation in playfulness of children’s Web sites might also have implications for this difference in children’s perception of pragmatic and hedonic quality of these different categories of children’s Web design.

Classic Web Sites. Based on the theories of Lavie and Tractinsky (2004) and Hassenzahl et al. (2008), we would expect the Classic Web sites to be perceived as having high usability (pragmatic quality) and to be supportive of children’s search behavior, because of the clear and ordered layout and structure. Cognitive developmental psychologists (Brown & DeLoache, 1978) reported that the younger the child, the more attention it is likely to give to stimuli that are irrelevant to the original task. Irrelevant stimuli that could cause problems for children while scanning a Web page or searching for relevant information, are absent on Classic Web sites. Therefore, perceived pragmatic quality and usability of these Web sites might be high.

The perceived hedonic quality of the Classic Web sites might be low, because of the low amount of playful characteristics, such as graphics, animations, audio, colors, games or playful navigation forms. Children’s motivation to search information on these Web sites might be low, because of a lack of stimulation through creative and exiting elements.
Classical Play Web Sites. The Classical play Web sites that combine the classical and playful approach might be the best solution for children; usability might be high because of the clear and ordered layout and structure and hedonic quality might be high because of the playful features. However, it may also be the other way around; the playful features might be distractive for children, which decreases pragmatic quality of the Web sites. And the playful elements might not be appreciated enough by children to have a positive effect on perceived hedonic quality.

Image Map Web Sites. The implications for the Image map might be just the opposite of the Classic Web sites. The perceived usability might decrease by the use of Image map Web sites, because common elements are not located on conventional locations and a child might not recognize how to navigate through the environment when he is used to more basic Web design. Also, scanning and searching might be problematic, because the playful interface offers distracting stimuli that are irrelevant to the search task. The perceived hedonic quality of Image map Web sites might be high, because of their creative, innovative and playful character. Children's need for novelty and change and relatedness (Hassenzahl et al., 2008) might be fulfilled by these non-conventional forms of navigation. These Image maps can be seen as metaphoric sites: they allow 'transportation' of children to the world of the Web site—for example, the school bus, boat or airplane. This allows the child to totally identify with the interface, which might also cause hedonic quality to increase. An interesting question is whether this intended effect of transfer indeed takes place: do children actually step into this new world, and does this have a positive effect on their evaluation of the Web site?

Future Research
By varying the amount of playfulness on the dimensions of visual design and navigation structure, something special is happening in the field of children's information and interaction design from which we do not know the implications for children's cognitive and affective states. For a long time, research on children's information design was limited to the usability of the environments and limited to pragmatic questions as how to design interfaces that are effective and efficient for children's search behavior. However, by adding playful elements to the design, such as images, games and animations, we see that designers try to influence user's emotions and affective states. This development can also be seen with the informational genre for adults (for example, company Web sites) in which designers try to influence the user's affective states.

This change from a pragmatic to a hedonic perspective of information design is in line with the concept of 'user experience' (UX), which has come up in the field of human-computer interaction (HCI) and interaction design (Hassenzahl & Tractinsky, 2006). User experience is associated with meanings ranging from traditional usability to beauty, hedonic, affective or experiential aspects of technology use. It is about the maturation of technology in which interactive products not only become more useful and usable, but also more fashionable, and fascinating things to desire. The user experience focus is on aspects beyond the functionality of design. It is about designing for quality experiences and pleasure rather than merely preventing usability problems, as was the case with interactive products in traditional HCI (Hassenzahl & Tractinsky, 2006).

We are optimistic that the coming years will mark a turning point in children's digital information design. It seems likely that more research will be conducted with more advanced technologies and with many different digital devices that study the relation between affective and cognitive factors during information processing.

In an explorative follow up study on children's interaction with a playful interface, we found that children experience problems finding the right information on this interface (Jochmann-Mannak, Lentz, Huibers & Sanders, 2010). However, this study neglects the affective states of the children towards this playful navigation design. In another study, we will study both cognitive and affective states of children using exactly the same Web content, but manipulated in three different design versions. Following the three categories that were discovered in this corpus study, these three design version will be: a Classic version, a Classical play version and an Image map version. This study will give more insight in the pragmatic and hedonic quality of Web sites for children and their interplay during children's search behavior.
Children's Web Design Conventions

Summary

A corpus analysis with 100 informational Web sites for children, shows that many design standards and conventions for children's Web sites correspond with guidelines and conventions for general Web design. Clearly, designers of children's informational Web sites follow general Web design guidelines. However, a closer look at the data of the corpus revealed three categories of children's informational Web sites with specific design approaches for children: a Classic, a Playful, and an Image map design approach. These different design approaches might be compared to what is termed 'classical aesthetics' and 'expressive aesthetics' by Lavie and Tractinsky (2004) and this perspective is also in line with the 'user experience' concept (Hassenzahl & Tractinsky, 2006). The three categories of children's informational Web sites might have different effects on perceived pragmatic and hedonic quality of the interfaces, which is of importance for future research on what design approaches do or do not support effective and hedonic user experiences.

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**Appendix 1: Coding Scheme for the Corpus Analysis**

<table>
<thead>
<tr>
<th>1. Visual design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Location or presence of items on the Web page</td>
</tr>
<tr>
<td>(0 = not available, 1 = top left, 2 = top center, 3 = top right, 4 = horizontally on top of page, 5 = left side of page, 6 = center of page, 7 = bottom of page, 8 = right side of page)</td>
</tr>
<tr>
<td>Location of the logo</td>
</tr>
<tr>
<td>Location of the main menu</td>
</tr>
<tr>
<td>Location of the sub menu (only evaluated on the subpages)</td>
</tr>
<tr>
<td>Location of the search window</td>
</tr>
<tr>
<td>Location of the servicelinks (for example, about us, contact, privacy statement, help, etc.)</td>
</tr>
<tr>
<td>Presence and location of advertisement</td>
</tr>
<tr>
<td>Presence of shortcuts</td>
</tr>
<tr>
<td>Presence of interactivity (for example, polls, guestbook, Q&amp;A’s, forum)</td>
</tr>
<tr>
<td>Location of home button</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1b. Scanability</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many screens can you scroll down? (1 = 1-2 screens, 2 = 2-3 screens, 3 = 3 screen or more)</td>
</tr>
<tr>
<td>Are there scrolling pages in a smaller window within the page? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Is there need to horizontally scroll on the page? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>
## Appendix 1: Coding Scheme for the Corpus Analysis (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the background of the page solid or non-solid? (1 = solid, 2 = non-solid)</td>
<td></td>
</tr>
<tr>
<td>Is the contrast between text and background high or low? (1 = high, 2 = low)</td>
<td></td>
</tr>
<tr>
<td>How many clutter is there on the page? (1 = clutter, 2 = no clutter)</td>
<td></td>
</tr>
<tr>
<td>Is the density on the page high or low? (1 = high, 2 = low)</td>
<td></td>
</tr>
<tr>
<td>Is there a clear focal point presented (for example, a large image or a large title) (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td><strong>1c. Readability</strong></td>
<td></td>
</tr>
<tr>
<td>What is the font size? (1 = normal, 2 = small, 3 = large)</td>
<td></td>
</tr>
<tr>
<td>Is the font playful? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Are there long or short texts on the page? (1 = short texts, 2 = long texts)</td>
<td></td>
</tr>
<tr>
<td>Are subheadings presented in the text on the page? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td><strong>1d. Type of media</strong></td>
<td></td>
</tr>
<tr>
<td>How many images are presented on the page? (0 = no images, 1 = low amount of images, 2 = average amount of images, 3 = high amount of images)</td>
<td></td>
</tr>
<tr>
<td>Are there animations or moving images or objects presented on the Web site? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Are there videos presented on the Web site? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• Do they make use of sounds on the Web site? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• Do these sounds start immediately when entering a page? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• Do these sounds start when hovering or clicking on a link or object? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• Can you control the sounds by turning them on or off? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• Are the sounds functional or non-functional? (1 = functional, 2 = non-functional)</td>
<td></td>
</tr>
<tr>
<td><strong>1e. Layout</strong></td>
<td></td>
</tr>
<tr>
<td>Is the layout of the Web pages consistent throughout the Web site? (1 = yes, 0 = no)</td>
<td></td>
</tr>
</tbody>
</table>

## 2. Navigation

### 2a. Type of navigation tools

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there menu structures presented with main- and subcategories (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Is there a search engine available? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Does the logo also work as a home button? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Is there a separate home button presented? (1 = yes, 0 = no)</td>
<td></td>
</tr>
</tbody>
</table>

### 2b. Format of the menu

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the menu presented in a row of textual or image labels? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Are the menu items presented by...</td>
<td></td>
</tr>
<tr>
<td>• textual labels? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• by textual labels with images? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>• only by images? (1 = yes, 0 = no)</td>
<td></td>
</tr>
<tr>
<td>Are the images used for the menu items meaningful? (1 = meaningful, 2 = not meaningful)</td>
<td></td>
</tr>
<tr>
<td>Is the menu presented within an Image map (that is, a large image with clickable objects that represent the main categories)? (1 = yes, 0 = no)</td>
<td></td>
</tr>
</tbody>
</table>
## Children’s Web Design Conventions

### Appendix 1: Coding Scheme for the Corpus Analysis (continued)

<table>
<thead>
<tr>
<th>2c. Appearance of new Web page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does a new page appear…</td>
</tr>
<tr>
<td>• in the same window? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• in a new window? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• to a bookmark on the same page? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2d. Marking of hyperlinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are hyperlinks recognizable as clickable? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Are hyperlinks marked as clickable when hovering over them with the mouse (for example, by changing size or color of the object)? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2e. Use of orientation cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your location within the Web site marked in the main menu? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Is your location within the Web site marked by a background color used for that particular section of the Web site? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Is a navigation path presented at the top of the page (a crumbs trail)? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2f. Search engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the search engine find results…</td>
</tr>
<tr>
<td>• on the Web site itself? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• on other Web sites? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• on the entire ‘mother Web site’ (for example in case of a ‘kids’ corner’)? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2g. Characteristics of the search results</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the characteristics of the presented search results?</td>
</tr>
<tr>
<td>• Does it only exist of a title of the result page? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does it present a summary of the result page? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does it present the theme to which the result page belongs? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does it present a description of the result page in one sentence? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does it present a snippet of the text from the result page? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Are relevant keywords for the search query highlighted? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Is a thumbnail presented of the result page? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• How many results are presented on the first page with search results? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Is there an opportunity to go to more search results on next search results pages? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does the search engine provide query suggestions when typing in a search query? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does the search engine provide a ‘Did you mean’ tool when the spelling is incorrect? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does the search engine provide search help when no results are found? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does the search engine accept keywords? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>• Does the search engine accept natural language (for example, an interrogative sentence)? (1 = yes, 0 = no)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2h. Menu structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the menu structure consistent throughout the Web site? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Is the menu structure user friendly? (1 = yes, 0 = no)</td>
</tr>
<tr>
<td>Are the main categories provided concrete or ambiguous? (1 = concrete, 2 = ambiguous)</td>
</tr>
</tbody>
</table>
Appendix 2: Dendrogram as Output of the Hierarchical Cluster Analysis

Dendrogram using Ward Method

Groups:
A = Classic Web sites
B = Classical play Web sites
C = Image map Web sites
D = left out of consideration
E = left out of consideration
Technical Communication
Practitioner-Student Interaction: An Opportunity for Students to Learn from the Practitioners’ World of Work
Ann Jennings

Abstract

**Purpose:** This article informs practitioners of the types of interactions that their peers prefer to have with technical communication students and of ways that those interactions can be arranged to the benefit of all parties.

**Method:** I conducted a survey of STC members regarding interactions between practitioners and students. A total of 480 practitioners responded. I analyzed and presented the responses.

**Results:** Practitioners are interested in and experienced at interacting with students in both company-sponsored activities, such as internships, and personally initiated activities, such as mentoring and part-time teaching. Practitioners acknowledge that students and employers benefit from these and other kinds of activities.

**Conclusion:** Practitioners can interact with students in ways that help the students and that honor the interests and time constraints of the practitioners. Practitioners and academics can initiate activities that bring practitioners and technical communication students together.

**Keywords:** internships, mentoring, practitioner-student interaction, academic programs

Practitioner’s Takeaway

- Practitioners who want to interact with technical communication students can do so through many types of activities and in various venues.
- With or without corporate sponsorship, practitioners can arrange student interactions by contacting academics who have access to students.
Introduction

In the field of technical communication, practitioners largely lack contact with university students. Yet part of the professional development of students is interaction with experts (Savage & Seible, 2010) so that the students can acquire the skills, knowledge, and values crucial to their success in the profession.

Academics (university professors) are the intermediaries who provide pre-professional training to students. Academics may also introduce practitioners and students to each other before the students apply for paid positions in the field. The importance of pre-professional contact between practitioners and students is acknowledged among professional communication academics, who have devised numerous ways to bring the two groups together (Little, 1993), including those ways most often written about: internships, review of student portfolios by practitioners, and participation by the practitioners on the boards of technical communication programs.

An early step in professional development is the socialization and acculturation of students in the workplace, an activity that may begin while the student is still enrolled (Lutz, 1989; Southard, 1989; Tovey, 2001; Yungmann, 1989). The primary vehicle for socialization is the internship, an activity whose significance has been widely researched regarding professional communication programs in the United States (Coggin, 1989; Heiken, 2004; Henze, 2006; Little, 1993; Meloncon, 2009; Munger, 2006; Rehling, 2000; Savage & Seible, 2010; Smith, 2003; St. Amant, 2003) and abroad (Alred, 2001; Smith, 2003). Internships bring students into the workplace where, ideally, they will observe and interact with technical communication practitioners.

Other forms of practitioner-student interaction—not necessarily face-to-face—that have been investigated by academic researchers are practitioner review of student portfolios (Dillon, 1997; Thomas & McShane, 2007) and practitioner participation on the supervisory boards of technical communication programs at institutions of higher education (Dillon, 1997; Sides, 1998; Yee, 1994). Partnering by corporations and the professional communication programs of multiple educational institutions to expand online learning opportunities has been proposed (Duin & Starke-Meyerring, 2003). Practitioners may also interact with students by teaching technical communication courses or serving as guest speakers for classes (Rogal, 1986; Thrush & Hooper, 2006), common practices at some institutions such as mine. Additional ways in which practitioners may encounter students include “field trips…student interviews of firms concerning communication and skills needed … [and] videotapes of real-world activities shown in classrooms” (Little, 1993, pp. 424-425).

A thorough search of the literature on practitioner-student interaction reveals that the majority of commentaries on this topic have been written by academics. For instance, an edited collection of articles on internships published in 1989 (Coggin) contains three articles by practitioners, eight articles by academics, one article by a combination of practitioners and academics, and a bibliography compiled by academics. The bibliography lists 27 articles by academics (including students), one conference paper by a combination of two practitioners and an academic, and one conference paper by a practitioner.

Several accounts have been written by co-author groups consisting of current and former practitioners, some of whom have become academics or were formerly academics. Other accounts have been written by individuals who have been practitioners and academics. Examples include discussions of internships by a group of three practitioners and four academics (Applewhite et al., 1989); a group of two practitioners and an academic (Caruthers, Caruthers, & Schmidt, 1989); practitioners (Felton, 1989; Heiken, 1994; Hogan, 1989); and two practitioners who are former academics (Mancuso, 1989; Murphy, 1989). Team-teaching is the topic of a study by an academic and a practitioner (Thrush & Hooper, 2006). “Bi-directional educational exchanges” between academics and practitioners is the topic of a study by an academic who is a former practitioner (Rehling, 1999, p. 385). Beyond these exceptions there seems to be a void of comments from the point of view of practitioners. I undertook a survey of technical communication practitioners as a way of filling that void.

Key Considerations Regarding Practitioner-Student Interaction

My survey sought the answers to three questions from the point of view of practitioners:

- What variety of experiences have practitioners had with students?
**Method**

In order to contact a substantial number of technical communication practitioners, I created an online survey using SurveyMonkey. I tested it on an academic; a practitioner who had also been an academic; and three additional practitioners, one of whom had recently been a student. Three staff members of the Society for Technical Communication vetted the survey for compliance with the organization’s requirements. I revised my questions using the feedback from these individuals.

The remainder of this report is based on material regarding technical communication practitioners extracted from a larger survey that also included separate feedback from academics and technical communication students. Only the feedback from and point of view of technical communication practitioners are presented in this report.

**Questionnaire**

The questionnaire consisted of the following questions, the answers to which are discussed later.

- Has the organization where you work now or where you worked formerly sponsored any of the following activities?
- Why does your organization support this activity or activities?
- What other activity does your organization support, and why?
- If one or more of these activities used to exist but have stopped, what are the names of those activities?
- Why have those activities stopped?
- If your organization has wanted to start one or more activities but has not done so, what are the names of those activities?
- Why have you not started those activities?
- Have you as an individual practitioner performed any of the following activities with students?
- If you [as an individual] used to perform the previously named activities with students but have stopped, what are the names of those activities?
- Why have you [as an individual] stopped activities with students?
- If you as an individual have wanted to start activities with students, but have not done so, what are the names of those activities?
- Why have you not started activities with students?

When compiling the data contained in the results section of this report, I analyzed it in two ways. I computed the percentages of responses to predefined answers that I supplied in the questionnaire, and I categorized and computed the frequency and percentages of answers to questions for which the respondents provided their own answers.

Respondents were encouraged to check all answers that applied, which explains why the percentages occasionally add up to more than 100%.

**Distribution and Response**

The Society for Technical Communication (STC) generously agreed to distribute my survey to its members and did so in September 2010. The survey was distributed to 6,829 members who had agreed previously to accept STC-originated emails. These members represent 87% of the total of 7,841 STC members in 2010.

The survey was also distributed through the discussion forums of the Association of Teachers of Technical Writing (ATTW) and the Council on Programs in Technical and Scientific Communication (CPTSC). I do not know how many, if any, practitioners were contacted through those two listservs; however, 78% of my survey’s respondents stated that they were contacted about the survey by STC headquarters and 4% by a Special Interest Group (SIG) of STC. Thus 82% of respondents were contacted by STC. Some respondents may have been contacted in more than one way; the
survey question instructed respondents to indicate all of the organizations or individuals, for instance, professors, who contacted them regarding the survey.

The rate of response to my survey drops off after the demographic segment. With the exception of a noticeable lessening in the number of responses as the survey questions progress, there is no apparent pattern to the surging and ebbing of responses to the questions that follow the demographic segment of the survey. Survey fatigue is a known phenomenon (Sinickas, 2007), and those who answered my survey exhibited a sign of it—slowing down or dropping out as the survey progressed.

**Demographic Information**

In the demographic section of the survey, 480 of the respondents declared themselves to be practitioners of technical communication. Of those, 90% stated that their primary occupation was that of practitioner, and 10% stated that their secondary occupation was that of practitioner.

These 480 primary and secondary practitioners represent 6% of the total 2010 membership of STC. This number is low and thus may not be generalizable to the whole of STC or to the larger field of technical communication beyond STC. The Occupational Employment Statistics publication of the U.S. Bureau of Labor Statistics states that the number of technical writers in the US in 2010 was 43,990 (May 17, 2011). It is not possible to know whether that number includes individuals who identify themselves by one of the numerous other titles listed in the demographic section of my report. Nevertheless, the 480 technical communicators who answered my survey constitute only 1% of 43,990.

Despite this small percentage, my survey reveals the experiences, motivations, and desires of practitioners interested enough in the topic to participate in the survey. Their ideas and experiences can be the spark that encourages a greater number and range of contacts between practitioners and students and inspires academics to create atmospheres and connections that make practitioner-student interaction likely.

**Location.** Of the 480 technical communication practitioners who responded to the questionnaire, 475 named their geographical location. Of the 475 respondents, most named the US with 83% or Canada with 10%. The remaining 7% of respondents named 21 other countries: Australia, Belgium, China, Denmark, Finland, France, Iceland, India, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Papua New Guinea, Poland, Singapore, South Korea, Spain, Sweden, and the United Kingdom.

**Job Functions.** When asked to select one or more of the nine answers that I supplied to the question “I work as a...,” respondents answered as follows:

- Technical writer/communicator (85%)
- Technical editor (45%)
- Information designer/architect (31%)
- Consultant (20%)
- Instructional designer (17%)
- Graphic designer (12%)
- Computer programmer (3%)
- Engineer (1%)
- Other (23%)

The comments regarding “Other” fell into two broad categories:

- Managers and owners holding many different titles: owner, vice president, director, manager, project director, or supervisor overseeing personnel as varied as technical writers or teams of writers; editors; instructional designers; and trainers. This same group of managers also reported that they work with communications, documentation, e-learning design and development, government proposals, health research, knowledge, localization, unspecified projects, and usability. (8%)
- Other job titles: trainer; worker in information development, quality assurance, translation, usability, and various aspects of the Web; and writer specializing in business, marketing, magazine writing, proposals, real estate, and scripts. (Less than 2% for each job title)

**Results**

Practitioners were asked to provide information about both employer-sponsored activities and activities undertaken by the practitioners as individuals. In both cases practitioners responded to questions about their interaction, lack of interaction, and desire for interaction.
Technical Communication Practitioner-Student Interaction

with students from technical communication programs. In the interest of limiting the results to responses of reasonable size, I have presented responses made by a minimum of 5% of those who responded to individual questions. As noted below, in some instances I provided answers that respondents could select, and in other instances, I offered the opportunity for respondents to supply their own answers. In several instances, the answer “Other,” accompanied by respondents’ comments, was of meaningful size. Those instances are included below.

Has the Organization Where You Work Now or Where You Worked Formerly Sponsored Any of the Following Activities?

I asked practitioners what types of student-related activities were supported by their employers. This question drew 338 responses to the eight answers that I provided. Student internships (36%) were the activity most often sponsored by employers. A second popular activity (19%) was contact with academic institutions regarding technical communication or related jobs available for enrolled students or recent graduates. Staffing a booth at a student career fair (13%) and hosting site visits from technical communication students (6%) were the final activities with a strong response.

Why Does Your Organization Support this Activity or Activities?

The reasons that organizations support student-related activities are of interest, so I asked practitioners their opinions of the motivations of their employers. For this question, I provided two categories of answers: benefits to the organization and benefits to the students.

Benefits to the Organization. This topic drew 269 responses. The benefit most often chosen was identifying potential employees (48%). Aiding students in completing their education (31%) was next. Contributing to the growth and development of the profession (30%) was also considered important, as was contributing to the growth and development of the educational institution (11%). According to respondents who stated their own answers in the category “Other,” the final benefit to the organization was that interns are a source of “cheap” or “inexpensive” labor (5%).

Benefits to the Students. Of the 237 responses to this question, six benefits drew the most uniformly strong responses of the whole survey. Practitioners believe that the most important benefit to students is learning skills and techniques currently in use (57%), followed closely by gaining knowledge of industry or organizational best practices (54%) and by learning how to interact with professionals in a professional setting (53%). Practitioners identify three additional benefits to students. Organization-sponsored student activities encourage students to enter the profession (41%). Organizations potentially provide students with an offer of full-time employment (40%), and organizations aid students in completing their education (38%).

What Other Activity Does Your Organization Support, and Why?

(The activities were named by the respondents; I did not provide answers in the survey instrument.) I was interested in other activities supported by employers, and I asked practitioners to name those activities. This question attracted 43 responses. The sole strong response focused on practitioners rather than students: employer-paid or employer-sponsored education for technical communication employees (12%).

If One or More of these Activities Used to Exist But Have Stopped, What Are the Names of Those Activities?

(The activities were named by the respondents; I did not provide answers in the survey instrument.) The names of student-related activities that organizations have stopped supporting indicate past employer support for various interactions between practitioners and students. The question drew 64 responses. The activity that was ceased the most often was internships (48%), followed by corporate participation in career fairs (8%), and job recruitment through educational institutions (6%).

Why Have Those Activities Stopped?

The reasons that employers have stopped supporting student-related activities could be a key to understanding the lack of contact between technical communicators and students. This question drew 74 responses. The loss of funding was the major reason (54%) for ceasing activities with students. The lack of suitable work for a student intern (22%) was also
important, as was the company’s loss of interest in the activity (15%).

As revealed by respondents who provided their own answers at “Other,” corporate constraints (11%), including reasons as diverse as budget cuts, a merger, a company going out of business, and work being sent overseas, were a major reason that organizations’ activities with students had stopped. The cessation of hiring because positions had been filled and the companies had no need of additional employees was cited (8%), and so were university-situated reasons, including changes in university courses, a lack of requests for site visits, and a lack of applicants for internships (7%).

If Your Organization Has Wanted to Start One or More Activities But Has Not Done So, What Are the Names of Those Activities?

(The activities were named by the respondents; I did not provide answers in the survey instrument.) I wanted to know the names of student-related activities that organizations have wanted to start but have not started. This question drew 45 pertinent responses, only two of which were mentioned in meaningful quantity. Starting a student internship (65%) was mentioned the most often, followed by speaking to students about the field of technical communication and jobs available (9%).

Why Have You Not Started Those Activities?

Respondents were asked to name the reasons that their organizations had not started student-related activities. The seven answers that I provided drew 178 responses. Five of the answers attracted a meaningful number of responses. Lack of funding (29%) and lack of time (26%) were the most often mentioned answers. They were followed by lack of contacts at a college, university, or technical school (9%), lack of appropriate staff (8%), and lack of appropriate students (6%). Of the responses categorized as “Other,” only lack of support from management (6%) was of significant size.

Have You as an Individual Practitioner Performed Any of the Following Activities with Students?

This question attempted to determine the student-related activities that individual practitioners have engaged in. The 322 responses to the 12 answers that I provided indicate varying degrees of involvement. Nine of the answers drew a meaningful number of responses.

The most popular answer was acting as a mentor to a student (28%), followed by making a presentation to a technical communication class or a related class (25%). Other important activities were serving as a part-time faculty member by teaching a course or courses in technical writing, technical communication, or a related subject (12%) and making a presentation to an STC student community (12%). Activities performed by fewer respondents were staffing a booth at a student career fair or similar event (7%), judging students’ technical communication portfolios (7%), and serving on the advisory board or governing board of a technical communication or related program (7%). Finally, a smaller number of respondents had performed two other activities with students: acted as a mentor to an STC student community (5%) or judged a student contest such as a technical writing contest or a poster contest in a technical or scientific area (5%).

If You [as an Individual] Used to Perform the Previously Named Activities with Students but Have Stopped, What Are the Names of Those Activities?

(The activities were named by the respondents; I did not provide answers in the survey instrument.) I asked individual practitioners to specify student-related activities that they had stopped performing. This question drew 68 responses. Three activities were mentioned frequently as having been discontinued: teaching part-time at the college or university level (27%), serving as a guest lecturer or speaker at a university or college or at an STC student community meeting (24%), and mentoring students, some of whom were interns (16%). Serving on an institutional advisory board (6%) was another discontinued activity.

Why Have You [as an Individual] Stopped Activities with Students?

I questioned why practitioners had discontinued student-related activities. This question garnered 163 responses to the nine answers that I provided, but only three answers were selected by a meaningful number of respondents. The most frequently selected answers were that the educational institution stopped inviting the technical communicator (10%) and the educational institution stopped sponsoring the event (7%). One answer supplied by practitioners in the “Other” category was substantial: lack of time (10%).
If You as an Individual Have Wanted to Start Activities with Students but Have Not Done So, What Are the Names of Those Activities?

(The activities were named by the respondents; I did not provide answers in the survey instrument.) Practitioners were asked to specify the student-related activities that they had wanted to start but had not started. The 62 responses named the activities that practitioners would like to start. Mentioned most often was mentoring students (34%). Also mentioned were becoming involved with internships (16%), making presentations to students at universities or to STC student communities (15%), and teaching technical communication part-time or full-time (13%).

Why Have You Not Started Activities with Students?

I asked practitioners to specify the reasons that they had not started student-related activities. This question drew 171 responses to the six answers that I provided. Four of the answers were selected by a meaningful number of respondents. The lack of time (41%) was the most frequently mentioned impediment to starting activities with students. Also important were the lack of contacts at an educational institution (21%), the lack of funding (19%), and the lack of appropriate students (6%). In the category “Other,” respondents provided only one answer of meaningful size, the lack of company interest (8%).

Discussion

This discussion covers the implications of the answers given by survey respondents to the three questions I asked earlier in this report: What variety of experiences have practitioners had with students; if practitioners do not interact with students, why not; and what types of activities would practitioners engage in with students if circumstances permitted?

Interactions That Occur between Practitioners and Students

Practitioners described student-related activities sponsored by their employers as well as activities that they engaged in on their own. Internships and mentoring ranked highest in frequency, followed by presentations to a class, and recruiting and information sharing. This hierarchy reflects the emphasis on internships in a number of sources, notably Coggin’s edited collection of articles (1989) that focus on internships. Other popular activities are participating in career fairs, serving as a part-time faculty member, and making presentations to STC student communities. These activities and those performed less frequently offer a glimpse into the interests of individual practitioners, who are in a position to offer insights, advice, and career examples to students; and into the interests of employers, who are in a position to offer jobs to students upon graduation. However, despite the articles published by academics on two additional topics, participating on technical communication advisory boards (Dillon, 1997; Sides, 1998; Yee, 1994) and judging student portfolios (Dillon, 1997; Thomas & McShane, 2007) are of only slight interest to practitioners.

Both academics seeking the involvement of practitioners and practitioners seeking ways to interact with students can benefit from the activities named above. Academics can approach appropriate companies regarding the availability of practitioners willing to attend career fairs and to speak to students in classrooms or at STC student community meetings. University placement offices may be able to recommend corporate contacts that can be approached by academics. Practitioners can contact educational institutions. Those who lack contacts can call the office of the Provost/Academic Vice President or the office of the Chair of the Department of English and ask for the names and contact information of appropriate faculty members or for a referral to a different department that may house the technical writing program. The faculty members can locate appropriate students, thereby removing another impediment to practitioner-student interaction.

Reasons that Practitioners Do Not Interact with Students

The lack of time, lack of contacts with educational institutions, and lack of funding prevent many willing practitioners from interacting with students. The percentage of responses citing lack of time is high. Because of this situation, academics will need to be inventive in their requests—so that they attract the attention of busy practitioners—and economical in the amount of time they request from these professionals. To counter the lack of time, academics can stress that the identification of future employees is worth the time...
expended. To counter the issue of lack of funding, some academics may point out that interns often are not paid for their internship work, especially if they are earning academic credit, just as they are not paid to attend a history class for which they are earning academic credit.

Academics will also benefit from recalling the most frequent reasons that organizations have stopped sponsoring student-related activities: loss of budget, lack of suitable work for an intern, and loss of interest in the activity. Due to the seriousness of these reasons, academics will need to apply imagination and persuasiveness to encourage the reinstitution of dropped activities or the establishment of new ones.

For instance, the loss of a corporate budget can be addressed by academics who offer low-cost or no-cost university facilities for company-student or practitioner-student events. The lack of suitable work for an intern may in some instances be overcome during a clear and thorough discussion about the types of activities that are suitable for interns, the skills that an intern can bring to a company, and the kinds of problems that interns can solve (Heiken, 2004). For example, I recently received a request from a major hospital for an intern who could create a social media presence for the hospital’s outreach program.

As to practitioners’ loss of interest in student-related activities, academics can contact sources of alternative practitioners through area chapters of the Society for Technical Communication and similar organizations, including the Public Relations Society of America, the American Medical Association, the American Society of Business Publication Editors, the American Society for Training and Development, and organizations related to technical communication, such as the American Society for Indexing, Inc.

**Student Interactions that Practitioners Want**

Unexpectedly, internships did not surface as practitioners’ top choice for interacting with students. The weighty number of articles on the internship, especially in the collection edited by Coggin (1989), had led me to expect that activity to dominate the poll. Instead, it was dominated by the desire to become a mentor. Although a meaningful percentage of practitioners wanted to work with interns, a nearly equal percentage wanted to become presenters to groups of students. Many also wanted to become instructors. When planning practitioner-student interactions, academics should remember the popularity of the role of expert informing non-expert, an attitude alluded to in publications written by practitioners (Felton, 1989; Heiken, 1994; Rehling, 1999; Thrush & Hooper, 2006). This enthusiasm can be tapped by inviting practitioners to speak to technical communication classes (Rogal, 1986) and to act as advisors to students and by hiring suitably qualified practitioners to teach technical communication courses. Local chapters of STC could collaborate by pairing willing practitioner members with students.

**Ways to Increase Practitioners’ Interactions with Students**

Because they are the likely approvers of student-related activities in their organizations, interested managers may want to reach out to nearby educational institutions to offer internships or other types of student involvement with practitioners. The reverse is also true, that academics who arrange student internships, guest appearances by practitioners, and the like, should consider identifying and approaching managers as well as individual practitioners.

Academics who intend to approach organizations about starting or continuing student-related activities should examine the portion of the results section that describes the benefits that organizations receive by sponsoring such activities. The list can be the source of talking points. The three benefits that practitioners consider to be the strongest are identifying potential employees, aiding students in completing their education, and contributing to the growth and development of the profession. Mentioning these benefits could result in the establishment of a student-related activity.

**Additional Recommendations**

In addition to considering the suggestions made above, practitioners who want to engage in student-related activities could identify existing activities within their organizations by approaching colleagues or managers. These individuals may know of current or past student-related activities in their own or other parts of the organization. Practitioners may also be able to create within their organizations opportunities to interact with
students. A key to persuading managers to inaugurate student-related activities could be the list of benefits to organizations stated in the results section of this report. Managers might be convinced of the wisdom of using internships, for instance, as a way to identify potential employees, which survey respondents named as the top benefit to organizations of sponsoring student-related activities. Less complicated and less time-intensive ways of identifying potential employees could be started, such as staffing a booth at a career fair.

Practitioners who lack the backing of their organization can also achieve their goal of working with students. Mentoring students can be done on one’s own time. If the amount of time available is short, students can travel to the practitioners’ location to take advantage of a lunch break. Time-strapped practitioners who want to teach can teach at night, on the weekend, or online. Teleconferences can lessen the time problem of practitioners who want to speak to classes. Practitioners can also participate in STC-sponsored activities for students. For example, a local STC chapter holds periodic lunch meetings at the university. Several interested members attend and make short presentations to students. The meeting room is free, the chapter provides sodas, and the cafeteria is available for members and students to purchase inexpensive meals.

Finally, a useful study could be written of the impediments academics face in valuing and locating practitioners and organizations that are interested in interacting with technical communication students. Such a study could identify activities that would satisfy the desires of practitioners and organizations while enhancing everyone’s understanding of the significant value that practitioners can bring to students who plan to enter the field of technical communication.

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About the Author

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The Language of Metaphors

Andrew Goatly’s textbook, written primarily for linguistics students, is predictably technical in its analysis of the metaphorical basis of language, but can nonetheless provide useful insights for the technical communicator.

Consider his observations about Root Analogies and the underlying metaphorical structure and origin of language. Goatly argues that language arose from and is structured by metaphor; that “metaphorical and literal language is a continuum”; and that linguistic change stems from the invention of new, “active” metaphors inevitably conventionalized into denotative terms or “inactive” metaphors (p. 147). Metaphors invented to describe new concepts gradually narrow their meaning to a precise, denotative definition. This process of literalizing metaphor serves a cognitive, conceptual function by making the unfamiliar familiar, as in the classroom comparison of electricity to water in a pipe (pp. 154–155). The initial metaphor loses some affective impact, yet gains semantic precision through literalization.

Conversely, juxtaposing familiar, literal terms in new ways introduces “extra ambiguity into the meaning of syntactic structures” (p. 241), as in “literary metaphors [that] often seem designed to bring about a re-conceptualization of experience” (p. 158) by defamiliarizing our habituated, attenuated awareness of reality. Language both literalizes metaphor for greater precision in meaning, and recombines literal meanings to reinvigorate our perception of the world.

Goatly’s concept of Root Analogy is related to Experientialist theories by Lakoff and others claiming that “most abstract concepts arise from . . . pre-conceptual physical experiences by metaphorical projection” (p. 42). Thus, the pre-conceptual observation that a “HUMAN IS [like a] PLANT” blossoms into many variations (“ripe old age,” “put down roots,” “dead wood,” “personal growth,” etc.) that are gradually deadened into denotation, but whose expressive power can be recovered by novel conjunctions of literal terms, as in Shakespeare’s sonnet 73, where the speaker describes himself as possessing “yellow leaves” and “boughs which shake against the cold” (pp. 43–44); in short, as a “HUMAN PLANT.”

A small, apparently finite number of Root Analogies can be transformed into literalized, nuanced meanings through “morphological changes” that “lexicalize metaphors and incorporate them into the semantic system” (p. 104). Thus, where Experientialism explores how metaphor shapes our basic knowledge of the world, Goatly explains how it ramifies into the many variations of meaning necessary to describe the world in detail. Experientialists show what metaphor means, its epistemological role; Goatly emphasizes how it works, its operational mode.

An understanding of Root Analogies like “PURPOSE IS DIRECTION” and “DEVELOPMENT/SUCCESS IS MOVEMENT FORWARD” helps the technical communicator optimize the cognitive, actionable expectations of the reader who seeks both precise understanding and practical direction from a document. Awareness of these Root Analogies can serve as criteria for determining whether a document satisfies the reader’s fundamental sense of the unity of intellectual flow and physical movement. The foregrounding of Root Analogies in even the subtlest, most nuanced documents retains the precision of denotative detail while engaging the experiential affective aspect of meaning, thereby optimizing communication in a holistic manner.

Donald R. Riccomini
Donald R. Riccomini is a member of STC and a lecturer in English at Santa Clara University, where he specializes in teaching engineering and technical communications. He previously spent twenty-three years in high technology as a technical writer, engineer, and manager in semiconductors, instrumentation, and server development.
Combining E-Learning and M-Learning: New Applications of Blended Educational Resources


For anyone who has ever doubted the international availability of virtual education or mobile communication devices, *Combining E-Learning and M-Learning* will resolve those doubts. In 19 chapters written by scholars from 15 nations, this book presents discussions of mobile learning and related pedagogy and technology. The potential for collaboration and exploration is examined, evaluation practices are considered, and ethical issues are reviewed. The chapters mentioned here touch on those topics and were selected to demonstrate the variety of nationalities represented by the authors.

“Transforming Pedagogy Using Mobile Web 2.0: 2006–2009” by Thomas Cochrane and Roger Bateman (both of New Zealand) introduces readers to the application of activity theory, participatory action research, social constructivism, and authentic learning environments to educational activities tied to Wireless Mobile devices (WMDs). The chapter recounts the development of a Web 2.0-dependent project for a bachelor’s degree in product design. The project required an array of student deliverables created with Web 2.0 tools and an assortment of interactions using smartphones. The chapter also examines a set of student learning outcomes tied to mobile learning.

“A Design of Collaborative Learning System Based on PDA for Improving Performance of Real-Time Learning” by Cheng-Li Liu and Kuo-Wei Su (both of Taiwan) discusses the planning, execution, and evaluation of learning activities centered on PDAs. The authors’ experiments apply to education delivered by smart phone. Of particular interest is their emphasis on the importance of the graphical and text-based interfaces for enabling students to grasp the lessons delivered and to interact with classmates and their instructor. Also emphasized are screen size and orientation, legibility of type, appropriate use of color, and ease of operation. After evaluating these characteristics, the authors conclude that the experimental lessons delivered by a PDA were successful in achieving the course goal: “improved students’ language learning ability in the m-based classroom” (p. 210).

“Ethical Considerations in Implementing Mobile Learning in the Workplace” by Jocelyn Wishart (UK) presents a matrix that is helpful for analyzing key ethical issues according to four core ethical principles—Do good, Avoid harm, Respect user choice, and Share resources fairly—pertinent to educational (pre-college) and health care settings. The matrix itself suggests a way to consider the ethical issues and core principles in a variety of settings, including colleges and universities, as well as corporations.

“Supporting Awareness in Ubiquitous Learning” by Hiroaki Ogata (Japan) explores the way that mobile technology can support “ubiquitous learning,” a type of lifelong learning enhanced by mobile devices such as PDAs as well as by RFID tags, GPS, environmental sensor devices, and digital videos. In this type of learning, the technology enables learners (inside or outside of an educational setting) to be aware of other learners and to collaborate on common goals. The technology also helps learners become aware of what they know and do not know, and directs them to the kinds of help they need, including peers.

Ann Jennings
Ann Jennings is a senior member of STC, 2009 winner of STC’s Jay R. Gould award, and professor of English at University of Houston-Downtown, where she teaches in the BS and MS degree programs in professional writing. She teaches online regularly using a learning management system that offers a mobile version accessible by iPhone®, iPod touch®, iPad®, Android™, BlackBerry®, and Palm® smartphones.
The Language Wars: A History of Proper English


If you are interested in learning more about the history of the English language and its use—or just want to refresh your memory on the subject, The Language Wars: A History of Proper English makes a good reference for you. Besides finding a summary of the history of the development of English from its earliest roots, you will also find Hitchings’ comments on current usage and development, including references to contemporaries such as John MacWhorter, a linguist who argues the interesting idea that “writing . . . is just a method for engraving on paper what comes out of our mouths” (p. 215).

Why is there a market for what Hitchings calls grammatical law-making? Is it a result of increased social mobility? In part, yes. In addition, the upper-class also wanted rules and guides. Hitchings explains that “an upper-class revulsion at the thought of being contaminated with middle-class vulgarity was a strong motive for the eighteenth-century codification of grammar. There was an intricate relationship between linguistic intolerance and the twin energies of aspiration and insecurity. This remains” (p. 87).

Some readers will enjoy and find it useful to read Hitchings’ thoughts on prescriptive and descriptive grammarians and approaches throughout history and today. Hitchings points out that since the Gregorian age, users of English worry that they could use language incorrectly. He also reminds us that some of the rules about English have strange and illogical roots. For example, a split infinitive in English at one time was considered taboo. This is because it is easier to translate from English to Latin. It is also because grammarians at one time thought English should be more like Latin. Are these good reasons to not split an infinitive? The answer according to Hitchings is no. These are not good reasons to the average speaker and not natural or logical in English.

The suppression of certain words in the English language is the topic of one chapter in The Language Wars. Hitchings notes examples that come from books such as Hugh Lofting’s Doctor Dolittle, Ray Bradbury’s Fahrenheit 451, and of course Huckleberry Finn. He explains how Thomas Bowdler’s The Family Shakespeare is another example of censorship because this version omitted words that had to do with anything sexual. Thus, we have the term “to bowdlerize” in our vocabulary today.

Discussion about the proper use of English can be as Hitchings puts it “cantankerous or petulant . . . but thinking and talking about what makes good English good and bad English bad can be, and should be, a pleasure” (p. 336).

Jeanette Evans

Jeanette Evans has more than 20 years in the field. An STC Associate Fellow, she is active in the NEO STC chapter where she serves as academic relations co-chair and newsletter co-editor. She has published in Intercom and presented at various STC functions.

Otto Neurath: The Language of the Global Polis


Many years ago my interest in all things visual was piqued by Bill Horton, whom I consider the guru of graphics in technical communication. My studies led me to Nigel Holmes, then art director for Time magazine, who in turn led me to Rudolf Modley and Otto Neurath, who were his mentors. More technical communicators should be familiar with the work of Neurath and now have a chance to do so through Nader Vossoughian’s Otto Neurath: The Language of the Global Polis.

As Vossoughian writes toward the end of the book, “I started out this project with little if any understanding of what I was up to. I was mostly just fascinated by those cool little pictograms that have become incredibly fashionable in art and architecture magazines in recent years” (p. 146). Those cool little pictograms were created
by Neurath, who was a technical communicator in Austria in the first half of the twentieth century, before the term was ever coined.

Neurath served as a museum curator for a good part of his life. At one point, he established a “Department of Transformation, which was responsible for distilling scientific fact down to clusters of important information and developing ways of organizing them in a pedagogically effective manner” (p. 59). Doesn’t that sound like a good definition of technical communication?

And the driving force behind Neurath’s ideas was his belief in the power of the visual. As if anticipating the explosion of visual media in our era he says, “Modern man [sic] is very spoiled by cinema and illustrations. He receives his education in the most comfortable of means, partly during his periods of rest, through optical impressions. If one seeks to disseminate socioscientific education generally, one must use similar means of representation” (p. 49). One wonders what Neurath would have made of the Internet and video games, with their heavy reliance on graphics?

Neurath developed the International System of TYpographic Picture Education (ISOTYPE), which tried to rely solely on pictures for communicating across all classes and nationalities. He thought pictograms “could stimulate the intellect and imagination in a way that letters and words alone could not” (p. 61).

This book does an excellent job in placing Neurath in his historical context. Those wishing to understand the history of graphic arts, especially in their European connection, will appreciate Otto Neurath: The Language of the Global Polis. At times the book is pedantic and will tell you more than you ever wanted to know about the period. But, if you’re interested in seeing how technical communication came into being, at least on the graphics side of things, you’ll like this book. It is beautifully published and contains many photographs and illustrations of Neurath’s pictographic work.

Charles R. Crawley
Charles R. Crawley is a lead technical writer at Rockwell Collins in Cedar Rapids, Iowa. He is the public relations manager for the Eastern Iowa Chapter and a member of the Technical Editing SIG. He also teaches as an adjunct at Mount Mercy University in Cedar Rapids.

Smashing Logo Design: The Art of Creating Visual Identities


British graphic designer Gareth Hardy’s book on “smashing” logo designs is written with fellow graphic designers in mind. But those who hire or work with graphic designers will also gain valuable insights from this almost 300-page book.

In Part I, Hardy explains the power of logos and includes a brief section about what logos are and aren’t, a necessary section given the common misunderstanding that logos are synonymous with brand. Next he describes the many types of logos: “from pictures to words to abstract symbols” (p. 9) and the advantages and disadvantages of each.

Part II—with 11 chapters—covers the steps a designer should take to design a logo for a client. From client communications and research to conceptualizing and committing design ideas to paper (or computer) to type and color, Hardy offers an exhaustive step-by-step process for creating a memorable and distinctive logo.

Chapter 9, which discusses alignment of a graphic element and typography, is a good example of how thorough the book is. In this chapter, Hardy plays with the layout of a stylized hummingbird and type for a fictional company. The bird and the type can each be proportioned differently and aligned in a variety of ways, some more powerful and impactful than others. You can pick your favorite from the six examples on page 117 and turn to page 119 to see Hardy’s final choice.

The book is a visual delight. Besides showcasing his design process with the hummingbird company, Hardy packs the pages throughout the book with countless examples of logos from around the world. And he names the talented designers of each memorable logo. Part III has more than 100 pages of logo examples. The eight-page index is extremely useful as is the nicely detailed table of contents.
**Smashing Logo Design** is a roadmap for the design process and explains why your chosen designer works as she or he does. For example, if you wonder why your designer is not willing to offer you a few sample logo ideas before hiring, Hardy explains. The chapters on preparing source files and logo usage guidelines should be required reading for clients.

Hardy covers the logo design process from A to Z. His book is a tremendous resource and a valuable addition to any corporate or personal library.

**Ginny Hudak-David**
Ginny Hudak-David is the senior associate director in the Office for University Relations at the University of Illinois.

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**Symbol**

I was very excited when I first learned about this book. I thought it would be an update to Henry Dreyfuss’ book *Symbol Sourcebook*, published in 1972. Dreyfuss was an American industrial designer, and *Symbol Sourcebook* was an incredibly useful compendium of the typical symbols, organized according to use.

The opening essay by David Gibbs, “See How You Feel,” led me to believe *Symbol* was the successor to *Symbol Sourcebook*, with its explanation of the differences between symbols, icons, and logos. Yet when I got into the meat of the book, I was very disappointed. It’s really not about symbols at all, but corporate logotypes. But once I got over this disappointment, I was able to learn some things, just not what I was expecting to learn.

*Symbol* is divided almost evenly between abstract and representational types of symbols. Abstract includes such designs as circles, chevrons, crosses, and arrows. Representation includes flowers, birds, stars, sports, and hearts, among others.

Each section focuses on well-known logos representing a type of symbol. For example, the abstract circle is typified by The Transport of London’s symbol, or “roundel.” The section on the roundel explains how it came to be and what its merits are. I was surprised when the authors failed to mention here what I think is the most distinctive thing about the roundel: its use of Eric Gill’s Gill Sans typeface.

Another abstract circle, a favorite of mine since high school, is the peace sign, which was the symbol for the Campaign for Nuclear Disarmament. (This is one of the few examples where the authors veer from corporate logotypes.) The peace sign combines the semaphore letters for N and D, which stand for Nuclear Disarmament.

The Nike “Swoosh” is an example of abstract curves, crescents, and arcs. A graduate arts student created that symbol in 1971 for $35 by basing it upon the wings of Nike, the Greek goddess of victory. The CEO of Nike later gave the designer a gold ring and an envelope full of Nike stock in appreciation.

The Mac apple is an example of representational fruits and vegetables. The bite in the apple was added because it looked too much like a cherry. It was also a play on the word “byte.”

The penguin of Penguin Publishing is an example of representational birds. It was drawn in 1935 when Penguin Books was founded and redrawn again in 1946 by famed typographer Jan Tschichold.

Each one of these examples is followed by many examples of other corporate logotypes that are similar to the one being explained, so you can see the variations in the design of the abstract or representational category.

So if you’re interested in the design of corporate logotypes, this is a very helpful book. I just wish they hadn’t named it *Symbol*.

**Charles R. Crawley**
Charles R. Crawley is a lead technical writer at Rockwell Collins in Cedar Rapids, Iowa. He is the public relations manager for the Eastern Iowa Chapter and a member of the Technical Editing SIG. He also teaches as an adjunct at Mount Mercy University in Cedar Rapids.
**Book Reviews**

**Head First Mobile Web**


With mobile technology, there is much debate as to which is best—a mobile app or a mobile Web site. If you're considering modifying your existing Web site to look great on mobile devices using responsive Web design, you should read *Head First Mobile Web*.

This book is not a reference, but it is written for those having previous Web design and development experience. Each chapter gives you many opportunities to apply the skills you learn about as you read providing you with hands-on examples.

What makes *Head First Mobile Web* different from other books you might consider? It incorporates lots of graphics and pictures. This was the first book where I got very excited about the prefatory matter. Because it is so visual and words are put within or near graphics, I was able to come up with ideas for my company's existing mobile applications before I began reading the first page of the actual content. As the book states, the publisher "thinks of a 'Head First' reader as a learner" (p. xxiv). As the authors point out, "Images are far more memorable than words alone" (p. xxiv) and the learner can have up to 89 percent improvement in recall.

Another plus I noted, even before beginning to read the book, is the code and resources for the chapter examples are available online at http://hf-mw.com. The authors recommend you use a text editor, a browser, a Web server, and the source code for performing the hands-on exercises for each chapter. You'll find as you read through the book and case studies that the examples become increasingly complex.

*Head First Mobile Web* begins with an existing Web site design for a fictitious business, The Splendid Walrus, to introduce the concept of responsive Web design. The authors discuss the possibility of a separate mobile Web site and which devices to support.

Other topics, such as what devices to support, how to avoid building for the lowest common denominator in mobile devices, and building mobile Web apps for the real world are also discussed.

You can learn how to structure your mobile Web site to be future friendly by reading about HTML5, CSS3, JavaScript, and PhoneGap and working through the exercises.

What I like best is the appendix, which covers additional topics not discussed in the individual chapters, such as testing on mobile devices. The authors list great tips, for example, visit your local mobile testing center (carrier store) to test your Web site on multiple devices. In addition, they discuss remote debugging of your mobile Web page using Web INspector RE mote (weinre).

The book closes with a description on how to install the Android SDK and tools for debugging Android mobile apps on emulators and devices.

*Head First Mobile Web* is a great reference if you are considering adapting your Web site for your users' phones and tablets, creating mobile Web apps that use offline mode and geolocation, and making your sites future friendly.

**Rhonda Lunemann**

Rhonda Lunemann is an information developer with Siemens PLM Software, a senior member and treasurer of STC’s Twin Cities Chapter, and a member and officer of the Hill Speakers Toastmasters Club (Club 4415).
Visual Storytelling: Inspiring a New Visual Language


The premise for visual storytelling is that our response to external stimulus is initially determined “by the parasympathetic nervous system,” and only “a few milliseconds afterwards” does our “brain get involved, adding logic and explanation to this instinctive emotional outpouring.” And because over half of the brain “is dedicated to the processing of visual input,” “pure text and numbers simply cannot convey information” as efficiently and memorably as “successful visual-based storytelling” (p. 4).

Unlike visual narratives, text and numbers require a secondary process to convert the signifier (the letters spelling “cat”) into a signified (the mental image of a cat) that is itself derived from a referent (an actual cat). Images and graphics—icons that look like what they mean—bypass the extra cognition required by text and numbers. Seeing an image of a cat with other images before and after, we experience the image directly, in a visual story that creates immediacy in continuity and meaning.

Though “not a how-to manual” (p. 7), the book does identify three stages in creating visual stories: find and verify the truth and quality of the data; “establish a clear narrative from within it”; and find a “succinct and visually engaging method of representation” (p. 6). The book contains hundreds of graphics illustrating these principles, including: a map of the world made out of sponges cut into the shapes of countries, with water added to each country proportional to its usage, thus raising that country’s height relative to the others (p. 106); a 3-dimension cross-sectional map of water captured from a river, processed before and after human consumption, and returned to the same river (p. 158); a survey of sexual activity represented as zippers ranging from completely closed to totally open (p. 223); a history of lesser wars since 1915, with deaths shown as different-sized “glass containers filled with blood, set out on a kitchen table” (pp. 72–73); class differences represented by a silver spoon for the upper class and forks of progressively lower quality for everyone else (p. 74); and a chart illustrating how people get hurt at the Burning Man festival (p. 210).

To get a sense of the creativity and originality of these graphics, readers are urged to visit the publisher’s Web site, http://usshop.gestalten.com/visual-storytelling.html, to browse image samples directly and see interviews with the designers featured in the book. Most likely, the technical communicator, having experienced the Web version of the images, will want the book, and it should provide ongoing inspiration for visualizing data in imaginative, persuasive, and memorable ways. It should be especially helpful in suggesting ways of discovering the visual narrative hidden in the numbers. Very highly recommended.

Donald R. Riccomini
Donald R. Riccomini is a member of STC and a lecturer in English at Santa Clara University, where he specializes in teaching engineering and technical communications. He previously spent twenty-three years in high technology as a technical writer, engineer, and manager in semiconductors, instrumentation, and server development.
Writing for the Web: Compelling Web Content Using Words, Pictures and Sound


The author, Lynda Felder, must have written the book she wished was available to teach her Pratt College students. Having been raised in the era of social media, their cry was likely “Don’t make me read print!”

Nowadays, isn’t it all about the message, the audience, and telling a good story? Don’t be fooled. The Web is not just aural, as were the storytellers of bygone days. It is still mostly written. This is clearly indicated by chapter titles in the book: Best Practices for Writing for the Web, Writing Nonlinear Interactive Stories, Writing Succinctly, Writing Instructions, and Writing Blogs.

Consider the author’s strategy for including Chapter 10, Refresher on the Rhetorical Modes. Originally inspired by ancient Greek philosophers, rhetorical modes can help organize your thoughts for Web writing. The four traditional modes are: Narration (tells what happened); Description (presents picture of what happened); Explanation (makes what happened understandable); Argument (persuades someone to agree or disagree with what happened). Doesn’t that cover the majority of content on the Web? Likely her college students never suspected that they were being encouraged to use Classical styles—especially when a sidebar in the chapter, one of many in the book, states that Plato wasn’t convinced writing was a good invention. Reverse logic?

Nearer to a technical writer’s heart is Chapter 11, Writing Instructions. The author breaks down the tasks to write steps into sections of Dos and Don’ts. Don’t Teach or Preach (readers will prefer a guide to a sage). Do Write for a Capable Reader (your readers are not likely six years old). Do Consider Multiple Learning Styles (remember all the fun and exciting ways you’ve learned on the Web). Don’t Explain Too Much and Don’t Explain Too Little (readers don’t need great detail but will be frustrated if steps are missing). Do Use Commands and Use Active Voice (enough said).

Do Provide Illustrations and Show Motion with Video or Animation (these orient the reader and increase involvement). And do Test, Test, Test (then revise the instructions until you are happy with them).

Why would a technical writer, or anyone for that matter, want to read one more book on writing? Felder gives a couple of her own reasons: 1) it’s a thin book; 2) you can zoom to what you want; 3) it engages you to think and is packed with examples, challenges, and suggestions; 4) it focuses on words, pictures, and sounds as elements for Web content.

Lynda Felder has obviously learned a thing or two about presenting an engaging message to a less-than-motivated audience. Writers of any type could benefit from her expertise.

Donna Ford
Donna Ford is a senior member of STC and has served on her local chapter’s board. She has been a technical writer since 1987 in the hardware, software, and government health care industries.

Thinking, Fast and Slow

Daniel Kahneman. 2011. New York, NY: Farrar, Straus and Giroux. [ISBN 978-0-374-27563-1. 500 pages, including index. US$30.00.] Stock fund managers perform no better than market averages. Computers predict performance of military officers in training better than psychologists. Lucky Larry Page and Sergey Brin are billionaires today because “a year after founding Google, they were willing to sell their company for less than $1 million, but the buyer said the price was too high” (p. 200). Nobel-prize winning psychologist Daniel Kahneman presents example after weird example, analyzing things that don’t initially make sense.

When explaining how the brain works, most books follow a hardware approach: this part of the brain does X, this part does Y. Kahneman, however, sees it as software: the brain works fast on these problems, slow on these others. Defined as System 1 and System 2, the fast and slow parts of the brain collaborate to help us understand the world. System 1 works well for instant
judgments, but when we have to multiply 74 by 19, we
use the slower, methodical System 2.

Sometimes lazy and easily overloaded, System 2
often lets System 1 do the thinking. Example: Ann
approached the bank. You likely imagined a woman
walking toward an ATM or building. The numbers
preceding that sentence influence System 1 to make
a judgment about money. However, as Kahneman points
out, “if an earlier sentence had been ‘They were floating
gently down the river,’ you would have imagined an
altogether different scene” (p. 80). That is, given an
ambiguous situation, System 1 jumps to conclusions.
System 2, being lazy, lets this happen. Not until other
cues appear does System 1 adjust.

Kahneman spends part 1 of the book defining the
ways the two systems work. Many of the examples, like
the following, appeal to language lovers: When test
subjects were asked to judge whether two words rhymed,
they performed faster when the words were spelled
similarly (vote–note) than not (vote–goat). Kahneman
calls this response a “mental shotgun” (p. 95) because
System 1 is doing much more—making connections—
than it needs to.

In part 2, Kahneman moves into the idiosyncrasies
of the brain grappling with probability. Unfortunately,
this section drags in many places, especially for
the reader who hasn’t taken a statistics course. The
content might be of more interest to those who know
Kahneman’s work in economics (for which he won the
Nobel). Part 3 livens up with the examples that began
this review. Our intuition and ability to judge take
center stage. Kahneman ends by discussing findings
around happiness as it relates to two selves—the one
that experiences life and the one that remembers it.

Each chapter is short and concludes with samples
using the terms defined therein; many chapters work as
stand-alone topics. Kahneman cites scores of researchers,
and most often, he describes the research and projects
he worked on over decades with his deceased research
partner, Amos Tversky. So often and so endearing are
the discussions that you leave the text knowing how
much Kahneman misses his friend.

Kelly A. Harrison

Kelly A. Harrison, MFA, works as a consultant, speaker, and
writing instructor in San José, CA. For over 20 years, she has
written print and online content for various high-tech computer
companies. Currently, she teaches writing at San José State
University and prefers short-term and part-time contracts.

The Wrong Word Dictionary: 2,500 Most
Commonly Confused Words


In an age of auto-correcting
smart phones and sometimes
incorrect spell check tools, The
Wrong Word Dictionary is a
great resource for writers in
every profession. The book is
small enough to carry in a
briefcase or store in a desk
drawer and the words are
conveniently arranged
alphabetically as in a standard
dictionary, which makes the reference tool easily
accessible for users. Dowling explains commonly
misused words (discrete versus discreet) and the
difference between more unusual terms (pool table
versus billiards table) as well. The text also explains the
proper way to use common idioms (it’s chock full,
thank-you, not chalked full) and the common use
spelling of words that have legitimate alternative
spellings (adviser and advisor). The text would also be a
useful tool for student writers trying to discern which
version of a word most suits the context.

Carolyn K. Dunn

Carolyn Kusbit Dunn is an assistant professor in the Department
of Technology Systems at East Carolina University. She holds
a PhD in Technical and Professional Discourse and teaches
Technical Writing. Before entering academia, she worked as a
journalist, a public information director for a municipality, and a
marketing professional.
Introduction to Graphic Design Methodologies and Processes: Understanding Theory and Application


It’s refreshing to read a slim book so full of practical ideas. Bowers concisely describes how graphic design methodologies and processes work for both academics and practitioners. Readers can read Introduction to Graphic Design Methodologies and Processes: Understanding Theory and Application when initially delving into graphic design, for reference once they understand the principles, and as they mature through their careers.

The page grid is one of the best features of the book. Bowers divides the page into two sections, with verbal descriptions on the bottom and visual explanations on the top. He uses the bottom left margin to add interesting information, definitions, or other facts about the topic. Usually he leaves the upper left margin blank, occasionally adding verbal information about the visual.

In the Introduction Bowers defines problem solving as “the cognitive process of engaging an issue or set of conditions for the purpose of transforming it” (p. xiv). This chapter introduces his four phases of graphic design: learning, identifying, generating and implementing.

Looking Broadly, the first chapter, explores research methodologies in the Learning phase of a project. Bowers shows how research, methodologies, and processes are interrelated.

Examining “how messages are sent, received, and interpreted” (p. 14) is the focus of Interpreting, the second chapter. In this very rich chapter, Bowers explores the range of theories on communication over the past century and a half. He explains how visual literacy helps people derive meaning from images and graphics.

In chapter three, Targeting, Bowers explains how to target messages to audiences for specific responses. This comprehensive chapter starts from the message strategy stage to gathering information about the audience using personas, flowcharts, and focus groups. He then explores how to audit and test a strategy before implementing and then evaluating a pilot.

By definition, chapter four, Creating, describes ways to produce visual messages. Bowers shows readers various methods to develop a message, including matrices and flow charts.

The final chapter, Looking Closer, describes projects by five designers who have put the methodology and processes into practice.

Back matter includes exercises for each of the four phases.

Throughout, Bowers recommends flexibility when applying each phase. He shows that in real life there may not be a straight path to finding a solution and that a good designer is flexible enough to try another method or process when s/he needs to, and, when needed, going backwards.

I love the format—it’s easy to use as you’re working on a project. I was disappointed, however, that to keep a double-paged spread stay open, I had to push hard on the page. Good that the binding holds up!

I was disappointed in the publisher’s pricing of the book. Read the book, but take it out from a library before investing in your own copy.

Beth Lisberg Najberg
Beth Lisberg Najberg has more than 20 years’ experience as an information and instructional design consultant, documenting systems, developing custom training solutions, and creating technical presentations for large corporations and public entities. She is principal of Beginnings (www.BeginningsDesign.com), an information design consulting firm.
**Jolts! Activities to Wake Up and Engage Your Participants**


They paid to come to your training session and there they are—falling asleep in the front row. Or, even worse, they are checked out and checking their e-mail. You’ve got to jolt them back to life.

An interactive exercise would do the trick, and 50 of them are collected in Sivasailam “Thiagi” Thiagarajan’s handbook, *Jolts! Activities to Wake Up and Engage Your Participants*. This manual provides teachable moments that can—at best—shake up comfortable assumptions and habitual practices.

The handbook is a distillation of concepts that Thiagi, who has a PhD in instructional technology, has developed over 45 years. He has published 40 books and more than 200 articles, including the chapter on simulations and games for the International Society for Performance Improvement’s *Handbook of Human Performance Technology*. *Jolts!* is co-published by the American Society for Training and Development. You can download handouts and slides from a companion website.

The quickest entry to Thiagi’s training philosophy is to play a game. Each game lasts a minute or two, and is followed by a longer debriefing, which is where the learning starts. These aren’t simple ice breakers, but part of a change management system.

Some participants will enjoy being challenged to see things differently. Others will rebel. *Jolts!* prepares facilitators for unexpected consequences. This is key because some exercises place participants in awkward or frustrating situations—often in front of peers or superiors. Some exercises might make the supervisors squirm.

One example (“What’s Measured,” page 233) is a familiar word game where players form as many words as possible from a set of letters. Yet, each team receives a different set of instructions: to form as many words as possible, to form as many words of five letters or more, or to form the longest word possible. Even though each category has a winner, some teams may end up feeling the reward system was unfair. In the debriefing, teams can compare this exercise with performance measurements in their own workplace and reflect on the importance of goal setting.

As with all the exercises, participants can come away feeling, “Hey, I learned something” or, conversely, “I hate it when my boss does that.” Or, better yet, the work team may have a dialogue and make lasting changes.

*Jolts!* is not a learning system in itself, and Thiagi warns against overuse. But its exercises may provide just the jolt a long training session needs.

**Katherine J. Hall**

Katherine J. Hall, PhD, is a freelance writer and editor. She retired from the University of Washington as editor of the journal *Northwest Public Health*. She has won Best of Show awards at the chapter and international levels of STC’s publications competition.

**Vision in Design: A Guidebook for Innovators**


*Vision in Design: A Guidebook for Innovators*, like any guidebook, does not need to be read front to back, a point emphasized by the authors in the introduction. Hekkert and van Dijk think that the average reader will go directly to the second of three sections, which is where readers will find the real meat of the book. In it, the authors explain in detail the method argued for throughout the entire book. In its simplest form, the point is this: every design must have a reason for being that is completely dependent upon the future context or environment (social, political, economic, etc.) into which the design will be implemented.

Hekkert and van Dijk indicate that much of the design that surrounds us is reactionary. Designers or
innovators see a problem with a product or service and design something that fixes that problem. The error of thinking this way, as the authors see it, is that it fails to take into consideration the time between the inception of the idea and its implementation. A problem that exists now may not still be a problem by the time a solution that fixes it can be brought to market.

The method Hekkert and van Dijk propose and argue for with *Vision in Design*, though they hesitate to label it a “method,” asks designers to spend significant time in analysis, considering the product or service, user interaction with it, and the present context in which it is used. Then, designers project the context in which the design solution will exist, consider future user interaction with the solution, and lastly figure out what product or service will best achieve the desired interaction in that future context. This approach ensures that whatever idea gets developed, whether a product or service, will have a reason for existing in the world at that future date.

The authors admit that this approach is counterintuitive and requires practice because in a real sense, it complicates the design process. However, the method does seem to result in solutions that work and are successful. As an aspiring designer, the aspect of the book that I found most useful and important was the idea that design is not just about coming up with an idea and developing it. It is more than doing some simple market research. Good design comes from knowing not only the audience, but the audience’s environment, and being able to produce design solutions that account for both of these. *Vision in Design* is a must read for designers at all levels, from those like myself, just starting out and trying to understand the many approaches to the design process, to those with more experience looking for a new and fresh alternative to the cycle of reactionary designing.

**Spencer Gee**
Spencer Gee holds a master’s degree in Composition and Rhetoric and teaches Freshman Composition at the University of Central Oklahoma. He also is working toward a degree in Graphic Design.

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**Risk and Crisis Communications: Methods and Messages**

As I began reading Walaski’s *Risk and Crisis Communications: Methods and Messages*, I became concerned with its occasional conflation of risk communication and crisis communication, which are distinct entities though they share some characteristics. Both risk communication and crisis communication may address potential health, safety, and environmental hazards. However, risk communication must occur in advance of a hazard becoming an imminent danger, whereas crisis communication must occur as the hazard becomes an imminent danger. This time characteristic changes the communication in small, yet vital, ways, and it’s certainly worth further exploration here. Despite my initial concern, the book does fill a valuable niche for risk and crisis communications professionals.

The book’s 11 chapters is divided into an introduction and overview of risk and crisis communications theories; practical explanations of how to craft messages for particular situations; and case studies and analysis. The first three chapters explore different risk communication theories from a risk perception/risk analysis perspective. Though this perspective means that Walaski bases her work on a Shannon–Weaver/transmission model of communication (which technical communication scholarship has mostly abandoned), it provides insight into how our subject matter expert colleagues view communication, which can be helpful when collaboratively developing messages. Some of the models she includes, particularly the Negative Dominance Model, are quite helpful for communicators: both risk and crisis situations can cause fear and uncertainty in audiences. This model suggests that communicators
should “overbalance” negative messages with positive messages (p. 29).

The bulk of the chapters (4–9) provide practice-based explanations for shaping risk and crisis communication messages. These chapters showcase Walaski’s valuable expertise in creating risk and crisis communication messages. Yet, she presents the practices sometimes in a way that may not be immediately reader friendly. In addition, some of the suggestions may look familiar to experienced risk and crisis communications professionals; for example, chapter 6 notes that one of the most common mistakes an organization can make is failing to provide consistency in its messages. However, communicators new to this practice will likely find it useful, while experienced communicators may appreciate the reminder.

The greatest strength of Risk and Crisis Communications lies in the case studies in Chapter 10, which focuses on the 2009–2010 H1N1 pandemic and the 2010 British Petroleum (BP) Deepwater Horizon Oil Spill. The BP Deepwater Horizon case study is especially strong given that the case straddles the risk and crisis communication divide.

There are better, more accessible books on both risk and crisis communication for practitioners. However, given the balance of theory and practical information in Walaski’s book, it is certainly a good addition to the library of risk and crisis communications professionals.

**Ashley Patriarca**

Ashley Patriarca is a doctoral candidate in Rhetoric and Writing at Virginia Tech. She earned her master’s degree in English (technical and professional writing) at the University of North Carolina at Charlotte, where she also worked in the Department of Enrollment Management as a technical writer.

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**Dreamweaver CS5.5: The Missing Manual**


I learned word processing with AtariWriter and WordPerfect, which used coding schemes strikingly similar to HTML. Much though I loved the control (and troubleshooting ease), I eagerly adopted visual tools such as Microsoft Word that automated what used to be complex tasks. When I began designing my own Web sites, writing HTML in a text editor worked well, but Dreamweaver made the details so much easier I quickly adopted it. Unfortunately, Dreamweaver grew in complexity to the point that I couldn’t simply blunder through the interface, learning the details by trial and error. Sawyer McFarland’s “missing manual” for Dreamweaver, weighing in at nearly 1200 pages, does what other books in this series do so well: provides guidance the developer neglects.

The first third of the book reviews the workspace, providing simple yet effective examples of using that workspace to create basic Web pages. This and subsequent sections provide everything you need to know to accomplish the basic tasks that lie at the heart of Web design. Sawyer McFarland clearly distinguishes between content and formatting, a key concept many Web designers seem incapable of grasping. The remainder of the book covers the bells and whistles that go beyond “basic,” such as design for mobile devices, interactivity, generating database-driven pages, and site management. The CSS sections include an effective introduction, supplemented by three chapters that delve into the details, including a crucial chapter on troubleshooting CSS problems. There are many external links, including one to Adobe’s BrowserLab, which lets you test your designs with a range of Web browsers. The 27-page index is both useful and accurate, a formidable challenge for such a large book.

Jaded pros who just want the facts may find the writing chatty, but that verbosity mitigates the “scare” factor many of us experience when facing complex new software. In any event, good technical communication solves that “problem”: key steps are numbered and
boldfaced for those who only want the overview, but
descriptions, details, and commentary follow for those
who need more. The writing is clear and effective
both at an overall structural level and at a sentence
level. Abundant and helpful sidebars, text boxes, and
screenshots support the descriptions. McFarland even
explains a few Dreamweaver puzzles, such as glitches
in coding database queries and why the Insert panel
sometimes malfunctions and stops Dreamweaver from
cleaning up messy tags in Design View. Though there’s
no chapter on accessibility, the topic merits a sidebar
with a link to the Web Accessibility Initiative. There are
occasional reminders as well about accessibility issues,
such as distinguishing between <bold> and <strong> tags
to support screen reader software, a reminder to use Alt
tags, and using the Summary property for complex tables.

No one book can cover every detail of Web design,
but Sawyer McFarland does a nice job of covering what
you need to know about Dreamweaver.

Geoff Hart
Geoff Hart has been creating and editing Web sites for nearly 15
years, and still finds it easier to fix problems using a text editor.

Painting with Numbers: Presenting
Financials and Other Numbers So People
Will Understand You
pages, including index. US$39.95.]

Have you ever looked at a
quantitative chart or table
where the numbers seemed
accurate enough, but where
their meaning was confusing?
Did you have difficulty finding
the information you needed,
understanding how the
numbers related to each other,
or identifying which might be
the most important? If so, you
experienced what Randall Bolten calls poor
“quotation.” Derived from “quantity” and
“communication,” “Quotation” is Bolten’s coinage for
“the act of presenting numbers, such as financial results,
electronically or in written form for the purpose of
informing an audience.” (p. xix) (Far too often, it is
done poorly.)

Bolten has spent more than thirty years as a financial
executive for high-tech companies in Silicon Valley,
where he has both produced and consumed quantitative
information. In Painting with Numbers he passes on
what he has learned.

Bolten stresses that quantation is a communications
skill that can be learned. He covers the rules and
principles that one must master to effectively design,
format, and present quantitative information to
maximize its readability, effectiveness, and suitability for
specific audiences.

Bolten says that small changes in the way numbers
are presented can make a huge difference in how well
they are understood, whether an audience finds them
convincing, and even the conclusion they draw about
you and your personal credibility.

Organized in four major sections, the book covers
rules, tools, real mastery, and a wrap up. Rules covers the
“nuts and bolts” of designing and laying out numerical
tables, and, to a lesser extent, visual charts and graphs.
It covers such things as selecting headings, units of
measure, degree of precision, alignment, and a myriad
other matters that can make or break quantitative
presentations.

Throughout, Bolten presents alternative layouts to
illustrate how each change impacts communication.
To make the most important points easy to grasp and
remember, he categorizes them as laws, deadly sins,
and pieces of strong advice. For example, “Deadly
sins” includes using “unclear, imprecise, or (worst of
all) incorrect row or column captions,” (p. 52) and
“using visual effects for any reason other than clarifying,
distinguishing, or adding meaning to information” (p.
38). For Bolton, it is all about communication, never
about adding unneeded visual sizzle. Bolten also covers
production issues, and includes tips on leveraging tools
like Excel to improve your work.

True mastery covers issues related to content and
audience, including selecting what to present, and
delivering it to maximize its usefulness to a specific
audience. The board of directors may need a different
set of numbers or level of detail than managers setting
production targets.

The wrap up brings it all together with a review,
and discusses such things as ethical issues and the
rare situations in which a true master might find it appropriate to break specific rules.

*Painting with Numbers* is an important guide to an aspect of technical communication that is too often overlooked. Anyone who must present quantitative information would benefit from reading it, probably more than once.

**Patrick Lufkin**

Patrick Lufkin is an STC Associate Fellow with experience in computer documentation, newsletter production, and public relations. He reads widely in science, history, and current affairs, as well as on writing and editing. He chairs the Gordon Scholarship for technical communication and co-chairs the Northern California technical communication competition.

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The Leader’s Guide to Storytelling: Mastering the Art and Discipline of Business Narrative


Communication trends come and go. Some have stronger legs than others do. I attended the IABC (International Association of Business Communicators) global conference recently and can tell you storytelling is still going strong. Taking advantage of the trend, or perhaps fueling the trend, is Stephen Denning. In 2005, Denning published the seminal *The Leader’s Guide to Storytelling: Mastering the Art and Discipline of Business Narrative*. In March 2011, he published the second edition with revised and updated content.

I’ll get to the question most pragmatic technical communicators will have in mind—and a question that Denning poses himself in the book. Is there a measurable impact to business performance that can be attributed directly to the practice of storytelling? Denning’s answer is good and honest. “The effectiveness of storytelling,” he writes, “is related to the nature and constancy of the leadership involved” (p. 39). Sometimes it adds; sometimes it detracts—it all depends on how leadership uses the tool.

The book’s best part focuses on storytelling narratives. Here, Denning provides easy-to-understand and easy-to-follow templates for eight different narrative patterns. He carefully details when they should be used, how they should be used, and for what purposes. He also includes tables for quick reference. My favorite narrative model presented by Denning addresses how to neutralize gossip and rumor in the workplace. That could be a book unto itself—and a really entertaining one at that! Other topical narratives Denning explores are motivating others to action, building trust, and getting teams to work together.

The opening two chapters and the closing two chapters are mildly interesting, but far less useful. A plus is the thorough bibliography Denning has put together. Those interested in further research on storytelling in leadership will have a good start.

I do have to say the index, though lengthy enough, is oddly cobbled. For instance, return on investment, which seems like an important topic and, in fact, commands several pages of discussion, is not listed in the index at all. Minor point, but for those still wedded to paper books as opposed to searchable electronic books, it may prove a little irritating.

Here’s what’s not so good about the book. Like most business books, *The Leader’s Guide to Storytelling* is overwritten by at least 100 pages. Every point is elaborated to the nth degree; every obvious notion tediously explained. Apparently, someone likes this style, as it’s pretty much the norm in business books today. The narrative models, the bibliography, and some of the less theoretical discussions, however, are well worth the extra verbiage.

The bottom line is *The Leader’s Guide to Storytelling* is a good, practical book. It’s current and relevant. If anyone seriously wanted to begin using storytelling in the workplace, there isn’t a better set of roadmaps to use than what Denning provides in *The Leader’s Guide to Storytelling*.

**Gary Hernandez**

Gary Hernandez is a communications director for BP. He received his English literature MA from George Mason University and received his technical writing MS from Utah State University. Gary belongs to STC and IABC.
Endangered Phrases: Intriguing Idioms Dangerously Close to Extinction


Author Steven D. Price might still say that the expressions in this book are going to pot (becoming useless) or playing second fiddle to (playing a less important role than) newer phrases. But he maintains that English language speakers aren’t using these expressions very much anymore. Nor are they using many of the more than 500 others he has collected in Endangered Phrases: Intriguing Idioms Dangerously Close to Extinction. His book is focused on phrases and expressions that are “on their way out” (p. 5).

As a former dictionary editor, Price has the background to understand what causes words to enter and exit a language, creating a need to revise dictionaries. He has not conducted the kind of intensive survey of language users that editors complete to codify changes needed in a dictionary. Instead, to assemble a “less erudite, more nostalgic and sociological book” (p. 5), Price tested phrases on “younger friends and colleagues” (p. 6). He presents them here in an alphabetical listing, giving a pithy, informal definition of each and a fuller explanation of its origin.

Phrases become endangered for many reasons; Price provides a few of them. Some expressions, such as bee’s knees (something that’s excellent), were merely faddish and died out when no longer popular. Others, such as now you’re on the trolley (now you catch on) or like a broken record (to repeat and repeat), fade away when the underlying technology becomes unfamiliar. In addition, ethnic and gender sensitivities drive expressions such as Indian giver (someone who gives a gift and wants it returned) and stew zoo (apartment house for female flight attendants) out of the language.

I don't agree with the author that all the phrases are close to extinction. I encounter many of them in conversation or in the media: read between the lines, beg the question (although Price contends it’s not used correctly), wild goose chase, at bay, Bronx cheer. Other expressions are not part of my experience: Procrustean solution, bar sinister, Adam’s off ox. How extinct they seem to any one person may depend on that person’s knowledge of literature, movies, the Bible, and regions of the country. As communicators, we can take advantage of Price’s research, and the knowledge that these expressions are not universally understood, and use them accordingly, depending on our audience.

The information supplied by Price on the origins of the expressions in Endangered Phrases is fascinating to anyone who loves language. Finding out that the phrase pulling up stakes originated with the Jamestown settlers, or that white elephants refers to albino Siamese pachyderms, broadened my understanding of the development of the English language. This, added to the author’s informal and humorous writing style, makes Endangered Phrases an informative, readable, and entertaining book.

Linda M. Davis
Linda M. Davis is an independent communications practitioner in the Los Angeles area. She holds an MS in Communication Management and has specialized in strategic communication planning, publication management, writing, and editing for more than 20 years. Linda is active in the STC Los Angeles chapter.
Cross-Cultural Technology Design: 
Creating Culture-Sensitive Technology for Local Users


Dr. Huatong Sun’s book, Cross-Cultural Technology Design: Creating Culture-Sensitive Technology for Local Users, integrates and builds on the cultural dimension models introduced by Hofstede with the design theories of activity, affordance, and genre in the proposed design framework called Culturally Localized User Experience (CLUE).

The primary audiences are academics, graduate students, and others who are interested in the theory of design, especially as it relates to participative user design, localization, and usability. The book focuses primarily on the WHAT and the WHY aspects of the model, and is densely packed with discussions about design theory as it relates to culture, specifically the adoption of text messaging.

Chapters 1–3 provide the theoretical underpinnings for CLUE, and contain an extensive literature review. Chapter 4 describes the research methodology used to study text messaging behaviors in the context of localized use and how that usage is dictated by the constraints of the technology and the socio-cultural context of the user.

For practitioners, the case studies in Chapters 5–9 are the book’s most interesting part. Here, Sun describes the text messaging habits of several study participants from China and the US. The uses and gratifications for each user are different, due to social factors, such as age, gender, status, life experience, and due to the way the technology is marketed and supported.

For example, text messaging in China became immediately popular partly because the phone plan included it in the pricing, and many people went from few communication options to an always available one. In the US, adoption took longer partly because phone plans charged extra for it, and people had many communication options.

Scattered throughout the book are examples of both successful and failed localization in design. These examples provide opportunities for discussion and cautionary tales for those of us who work in multicultural environments. Such stories are helpful in showing the importance of considering the needs and context of all your users.

Dr. Sun outlines on pages 233–234 the “seven defining features of the CLUE framework:

1. The CLUE approach highlights the praxis of use.
2. Local culture constitutes the dynamic nexus of contextual interactions and manifests numerous articulations of practices and meaning.
3. User experience is both situated and constructed.
4. Technology use is a dual mediation process.
5. Structured affordance comes from dialogic interactions.
6. Culturally localized user experience respects use practices of individual local users and values their efforts at user localization.
7. Design is both problem solving and engaged conversation.”

As a book describing research in the area of user-participative design and localization, the book succeeds, and adds important ideas for advancing a design model that is culturally sensitive. However, practitioners might be disappointed by the lack of HOW information that lets them immediately apply this model in a corporate environment where budgets are limited and schedules are tight.

Katherine (Kit) Brown-Hoekstra
Katherine Brown-Hoekstra, of Comgenesis, LLC, is an Associate Fellow for STC, speaks at conferences worldwide, and has authored many articles on various topics related to technical communication and internationalization. She has a background in life sciences and more than 20 years of experience. She also coauthored a book on managing virtual teams.
The Future of Looking Back


How will your family and friends remember you after you're gone? Will your family be able to (or should they be able to) access thoughts that you posted and sites that you frequented online? How is our increasingly digital presence likely to change our future experience of life? Richard Banks and his colleagues at Microsoft Research Cambridge study these questions of heritage, history, inheritance, and reminiscence daily.

Increasingly, our personal collections of stuff include digital as well as physical things, and these two classes of objects have very different properties. Both can become family heirlooms that aid the process of inheritance and storytelling. However, where “Physical things…can play on all the senses through their material attributes,….. Digital things, by contrast, are experienced to a great extent through the visual sense, primarily through the screen” (p. 21).

Digital and physical qualities are both valuable. Where digital photos are normally clear and infinitely reproducible, “The Digital Harinezumi camera, available in Japan…takes digital images and through a combination of software and hardware creates photos that are grainy and overexposed” (p. 101). Its makers even plan to make their product’s quality unpredictable by periodically introducing different lenses. On the other hand, digital recording through devices like Microsoft’s Kinect may let us perfectly recreate three-dimensional scenes of people (loved ones, friends) or places (home, work) that we want to remember.

Is it possible to combine the physical and digital? Banks notes, “Digital and physical things are merging as we create more technological objects and as we embed digital properties into physical things that were inert before” (p. 33). Microsoft Research has created such items as a Digital Slide Viewer and a Playlist Player, items that mimic their ancestors—the simple slide viewer and the LP record player—while employing digital storage and display technology. Tales of Things (http://www.talesofthings.com/) lets users create a unique Quick Response (QR) code to print and apply to any object, leading anyone with a smartphone to a Web site about the tagged object. Similarly, BookCrossing (http://www.bookcrossing.com/) generates a unique identifier with which a user can label a book that is then “released into the wild” (p. 42). Readers add their own remarks to a book’s online history.

The Future of Looking Back is short, yet extremely readable. In three sections: “Stuff and Sentimentality,” “A Digital Life,” and “New Sentimental Things,” Banks explores a lifestyle in which the new and immediate seem to be prized above the old and sentimental. Realizing that our futures will comprise both digital and physical elements, Banks wonders, “How much could the capacity for digital technology to record [objects in our lives] loosen our obligations to keep [those objects] as physical things?” (p. 96).

Mike McGraw

Mike McGraw is an STC senior member and a senior staff technical writer for Qualcomm, Inc. in San Diego, California. His team helps Qualcomm engineers with information management systems such as SharePoint, Jive, and wikis.

Writing for Dollars, Writing to Please: The Case for Plain Language in Business, Government, and Law


While some may not be familiar with the grass-roots “plain language” movement, recent developments are bringing the movement more attention. Thus, Joseph Kimble’s book is timely. Plain language is making headway in the United States. The Plain Writing Act signed in 2010 requires executive agencies to write and revise documents using plain language, and the Plain Regulations Act introduced in 2012 requires agencies to write regulations in plain language. The plain language movement has
supporters in the UK, Canada, Australia, New Zealand, South Africa, and Sweden, among others.

Kimble is a law professor, who has supported clear legal writing over more than three decades. This book compiles and expands upon material he published in previous articles. As the book’s subtitle suggests, Kimble goes beyond the legal sphere to provide a well-rounded account of plain language applications.

Part One is a brief story about how Kimble became interested in plain language. As a young Michigan Supreme Court lawyer, he had to draft new and updated court rules. Two handbooks influenced his work greatly: Reed Dickerson’s *Fundamentals of Legal Drafting*, and Wilson Follett and Jacques Barzun’s *Modern American Usage*.

Part Two summarizes the tenets of plain language. Kimble’s categories for these include general elements, design, organization, sentences, and words. The tenets he provides are succinct. Kimble encourages readers to consult the plain-language literature to understand the guidelines deeply. Unfortunately, the bibliography he references is not in this book, but in his 2006 book, *Lifting the Fog of Legalese*.

Part Three dispels ten myths about plain language. Kimble cites published studies and historical examples to effectively refute the myths. Among the myths: plain language is anti-intellectual; plain language focuses on textual features at the expense of readers; plain language is just using short words and sentences; and plain language is imprecise.

In part Four, Kimble identifies forty highlights in the history of plain language since the 1960s, in and beyond the US. These include influential publications, laws and rules, projects and activities, and organizations. Kimble writes that he hopes the highlights will provide a sense of accomplishment to plain-language veterans and an inspiration to newcomers.

Part Five reflects the book’s title. It discusses benefits of plain language for organizations (writing for dollars) and for their audiences (writing to please). Kimble cites fifty studies here. Some come from journals; others from newsletters, presentations, and personal communications. Several come from countries abroad.

Readers will move quickly through this compact volume. Kimble’s footnotes provide access to his sources, although a bibliography would be more usable. If you want a sense of the plain language movement’s history and of the benefits plain language provides readers, *Writing for Dollars, Writing to Please* will benefit you.

**Russell Willerton**

Russell Willerton is an STC senior member and an associate professor at Boise State University.

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The Author’s Toolkit: A Step-by-Step Guide to Writing and Publishing Your Book


At every cocktail party there’s someone who bores the other guests by going on and on about plans for writing a book, but somehow the book never gets written. In *The Author’s Toolkit: A Step-by-Step Guide to Writing and Publishing Your Book*, Mary Embree throws a monkey wrench into the would-be writer’s excuses for talking rather than writing.

Embree covers the entire process of writing a book from conceiving the idea through researching, writing, and editing, to approaching agents and reading book contracts and collaboration agreements. Chapters on “The Rules of Writing,” “Writing Fiction,” and “Writing Nonfiction” give basic advice. Others tell how to find or form a writers group and the pros and cons of doing so, how to write a book proposal, and how to prepare a manuscript for submission. Finally, Embree discusses copyright and other legal issues. The book closes with a list of helpful publications and organizations including a glossary that defines terms such as “active voice,” (p. 201) “LCCN,” (p. 205) and “query letter” (p. 206) that might be unfamiliar to new writers. The chapters are brief but solid, and the information contained in each is well chunked and usable.

Embree’s tone is positive. “You may feel that you are not a good enough writer to write a book,” she says. “But the principles of writing are the same no matter what you are writing. If you have ever written anything—business proposals, technical manuals,
doctoral dissertations, articles, essays, poetry, or even a daily journal—you can learn to write a book” (p. 1). Encouragement also comes from the quotations from famous writers and writing coaches sprinkled through the text. Embree uses her own previous book as an example to show how a writer can succeed in transforming an idea into a book.

The audience for Author’s Toolkit is clearly first-time writers, but anyone new to publishing will find the sections on working with agents and publishers useful. Some of the material, such as the list of commonly misused words, is easily available in other places, but it does make the book a handy all-in-one reference.

If the “toolkit” nature of this book is a strength—it provides introductory information on any topics readers are not familiar with—it’s also a weakness in that it doesn’t go into depth on any one topic. In particular, the discussion of self-publishing could be expanded, especially given that self-publishing is an important tool that first-time authors can use to break in.

Embree’s Author’s Toolkit may contain just what you need to get started on your book, and you might want to take it along the next time you’re invited to a cocktail party. Even if your own author’s toolkit is complete, you’ll probably meet someone there who needs this one.

Marilyn R.P. Morgan
Marilyn R. P. Morgan is an STC senior member and has an MA in English from the University of Tennessee. After serving as a technical writer and editor in academic and government research organizations, she now works as a freelance writer and teaches English at the college level.

Google+ for Business: How Google’s Social Network Changes Everything

Google+ for Business: How Google’s Social Network Changes Everything provides an excellent jumping off point for embracing Google+, Google’s newest attempt at social media. The book’s author, Chris Brogan, is a person who seems to be on the bleeding edge of all things social media since the bulletin board services of the 1980s. And, because he published this book so soon after Google+ launched, you’re not going to find step-by-step directions for how you should set up and use the platform for business. Rather than being a weakness of the book, it is its strength as well as the excellent examples that Brogan shares of how others are being successful with Google+.

As with other social media platforms, there’s no one-size-fits all approach to Google+. If you’re still under the impression that this platform is Google’s answer to Facebook, you’ll learn that there is more to it than the familiar aspects. Brogan explains, “Google+ is a social network…that Google uses to better understand the human aspects of sharing information (like pointing people toward specific links) and as such, Google uses information gathered in Google+ to improve search rankings and findability of information. Being that Google is the #1 search engine in the world, you might now have another reason to consider picking up this book” (p.1).

Besides while Brogan doesn’t provide a specific roadmap for how to best use this newish platform, he does give you pointers for getting started, including getting organized, building out-bound circles, sharing links, building use of the platform in your schedule, and using hangouts.

Throughout the book, Brogan delves into detail and shares examples of companies who had embraced Google+ well in the early days. If you’re a small business, part of a marketing department, or even charged with promoting your own department within your
organization, you’ll have a veritable smorgasbord of things from which to choose.

As I’ve already said, *Google+ for Business* hit the shelves when most people were confusedly saying, “Google-what?” so you may be asking what of value is there beyond a high-level discussion of the social media platform. When I received my review copy my thoughts were, “It’s too new; there’s not going to be much more than the usual high-level usage stuff; etc.”

I found, however, that I was highlighting and noting excellent strategic ideas, and learning of several tools that let me use Google+ beyond keeping up with those around me. You see, there’s this whole aspect of Google Hangouts that, when used effectively, can mean the difference between a mediocre client/customer/co-worker experience and a stellar one. Chapters 11 and 12 alone are worth the purchase price.

Brogan’s writing style makes for a quick and interesting read; something many can do in a few hours. I would definitely add *Google+ for Business* to your list of books to read.

**Louellen S. Coker**

Louellen S. Coker has over 15 years in public relations, marketing, Web and instructional design, and technical writing/editing. She has an MA in Technical Communications, is founder of Content Solutions, STC Associate Fellow, and past Lone Star Community president. She conducts workshops about effective use of social media and portfolios.

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**Blah Blah Blah: What to Do When Words Don’t Work**


Dan Roam’s newest book, *Blah Blah Blah: What to Do When Words Don’t Work*, is a tale of how to communicate more effectively using words and visuals. The richness of the book is the complex way he integrates text, visuals, acronyms, and your imagination to show how to do this.

Blah Blah Blah, according to Roam, is what happens when someone gives a boring presentation. He describes four levels of clarity for presentations, from clear, the best, to boring to foggy to misleading in his Blahmeter.

This leads to Part 2, an introduction to VIVID (Visual Verbal Interdependent) thinking. Roam explains how our society needs to have balance between visual and verbal components. He introduces us to his metaphor, the fox and the hummingbird. The fox sees the world linearly and is analytic; the hummingbird’s view is spatial and is synthetic. The point is “only by combining both views do we see the big picture” (p. 89). The hummingbird, always shown as a blue outline picture, and the fox, always depicted in black, are the basis for Roam’s Vivid grammar.

The Vivid grammar uses six elemental pictures plus words to compose and present ideas visually. He posits these pictures as equivalent to parts of speech to help you use the correct visual tool to tell a story.

Are you starting to see the picture?

Part 3 introduces the seven essentials of a Vivid idea, in which Roam explains and shows how to include the forest and the trees in any communication. The forest is the core idea, and the six supporting attributes surround the forest.

He veers into fascinating examples in this section, from the Newtonian to Einsteinian views of the universe to game theory to 36 visual metaphors to branding business books. These fascinating examples show Roam’s understanding of visual thinking and creating.

Roam uses colors consistently to show the visual (blue) and verbal (black) ways of thinking and expressing ideas. He ties this together with the fox and
the hummingbird so that the readers are constantly aware of which way the hummingbird thinks and can also understand how the fox counterpart thinks. He designed the page format so that the text column is subtly distinguishable from the visuals that are accompanied by captions in the margin so you can read the book’s text only or visuals only. Obviously, it’s richer to read both parts.

The appendices contain checklists that summarize the book and are useful job aids.

Yes, these are “clever” ideas. Roam, however, carries them through the entire book so completely that readers can automatically recall both the fox and hummingbird points of view to change their own behavior.

Highly recommended for those curious about how the other half lives.

Beth Lisberg Najberg
Beth Lisberg Najberg has more than 20 years’ experience as an information and instructional design consultant, documenting systems, developing custom training solutions, and creating technical presentations for large corporations and public entities. She is principal of Beginnings (www.BeginningsDesign.com), an information design consulting firm.

DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA

The book is comprised of three parts. The first part includes an introduction to topic-based writing, which is the foundation for organizing information in DITA. For each of three main topic types (tasks, concepts, and references), the authors list guidelines, best practices, and examples of proper element usage and transformed output. Writers might find the task analysis example useful for planning tasks and supporting concepts and references. Short descriptions can be one of the more challenging elements to write, and the authors note that they are more than just the topic’s first paragraph. Short descriptions are also useful as abstracts for search engine results and link previews for related topic links. The provided tips help ensure that the short description content is consistent and useful in multiple situations.

The second part covers content architecture. The authors describe how to organize information using maps and submaps. There are several types of links available in DITA, and the authors describe each type and provide code and output examples. They discourage excessive use of inline links, but show examples of appropriate times to use them. For example, you can create an inline link to repeated steps that directs the user to the correct step regardless of any changes you make to the number of steps in the task. Relationship tables and collection types can be confusing concepts, but the authors explain them well. The authors recommend having a strategy for using metadata in your topics, including strong keywords and index entries that can make your information easier to search.

The third part includes information about content conversion, DITA code editing, and content editing. For those considering moving to DITA, the authors advise defining conversion goals, creating a pilot team, and choosing which conversion process (pilot or full production) works best for your team. One of the most critical decisions is whether to convert content in-house or hire a vendor to do the conversion. Another is whether to convert existing content to DITA and then clean it up, or reorganize existing content into topics and then convert to DITA. The authors are advocates of code reviews and describe how to implement them with your team. They also suggest that editors edit the DITA source files directly, so that they can review both the content and the markup.

DITA is a powerful and extensible architecture, and after you make the conversion to DITA, it truly
is difficult to return to the “old ways” of authoring content. Moving to DITA is an arduous process that requires planning, learning, and patience, but DITA Best Practices provides a detailed blueprint for implementing DITA successfully.

Mary C. Turpin
Mary C. Turpin is a senior technical writer with F5 Networks, where she writes hardware documentation. She belongs to Sigma Tau Chi and received a Professional and Technical Writing MA from the University of Arkansas at Little Rock.

The Complete Idiot’s Guide to Getting Published

This book is not one you pick up and read from cover to cover in one sitting or even in several. This is a book (to paraphrase A Child’s Christmas in Wales) “that tells you everything about getting a book published, except the why.”

The Complete Idiot’s Guide to Getting Published is a cookbook, a schoolbook, and something of a reference. Split into five parts, each matching a stage in the book creation and publishing process, it walks you through all the steps involved in getting a book published, whether that be as a self-published e-book or a more traditional book done by a big publishing house. While remaining positive and encouraging, Bykofsky and Sander clearly present the many challenges involved in getting a book published, and the ways to meet them.

Part 1: As You Begin to Write includes chapters on why to write, what to write, and how to find topic ideas. Part 2: Submitting to Publishers contains chapters on writing queries for both fiction and non-fiction, and what to submit that editors and readers will want to read. Part 3: Getting a Book Contract has information on finding and choosing an agent, what an agent can and can’t do for you, and a brief section on understanding a typical book contract. Part 4: Working with a Publisher covers what happens after you have a contract, including working with editors, realizing that you’ve given up control of your book, and (the larger section) the multitude of ways to get your book publicized. (People don’t buy what they don’t know about.) Part 5: Continuing Your Career as an Author provides guidance on what to do after you’re a published author and how to work on your subsequent books.

As reference material, The Complete Idiot’s Guide to Getting Published contains a glossary, lists of additional books and blogs for writers, and a few sample book proposals. A caveat, though, is that the sample contracts the authors provide are strongly slanted in favor of the publisher. For example, authors give away things like rights to publication in other forms (e-book, audio book, etc.), subsidiary rights, and such. Look at them as worst-case contracts, and get a good publishing-savvy lawyer who works for you (not your agent, not the publisher) to review and comment on whatever contract you are offered. Remember, that in this world, everything is negotiable and has a price. Oral promises are not worth the paper they are written on.

In summary, this is a good book for anyone wanting to get started (or who has started and is now stuck) with the process of writing a book and getting it published. It provides an honest look at what is required and the steps required to get “on the shelf.”

Grant Hogarth
Grant Hogarth has been writing, editing, and designing books for over 15 years, producing both digital and paper documentation for numerous companies. An STC senior member and a former STC chapter president, he is active in the Lone Writer SIG. His STC conference presentation topics have included new technologies and project management.
Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions


Books like this are notoriously difficult to review. Yet I have to say that I have a surprising number of them. 365 Ways to Cook Chicken; The Universal Principles of Design (also from Rockport Publishers, 2003); 1000 Vegetarian Recipes (many are cookbooks, I think).

On the other hand, what may be difficult to review is a pleasure to own. Universal Methods of Design is not the kind of book you sit down to read. However, when you want to figure out what research technique might be the right one, this may be the first book you grab off of the shelf.

Martin and Hanington pulled this book together with the goal of the “simple intention of aggregating 100 different ways to collect user-centered research data” (p. 6). They realized in that process that “integral to the methods and techniques are the conversations that they facilitate—conversations with stakeholders, team members, clients, and most importantly, with the people who will ultimately use designed products, systems, and services” (p. 6).

That intention is the key to the success of Universal Methods of Design as a reference. The authors list the 100 methods alphabetically. Additionally, they designate each of the methods/techniques with a phase (1-5) that is typically associated with a design project: 1) Planning, Scoping, and Definition; 2) Exploration, Synthesis, and Design Implications; 3) Concept Generation and Early Prototype Iteration; 4) Evaluation, Refinement, and Production; and 5) Launch and Monitor (p. 7). The authors provide another key for selecting your method through use of a note at the bottom of each method that defines the method’s facet: behavioral/attitudinal; quantitative/qualitative; innovative/adapted/traditional; exploratory/generative/evaluative; and participatory/observational/self-reporting/expert review/design process (p. 6).

The last helpful tool is a set of see also suggestions. For example, if I am considering 12 Cognitive Mapping, I might also want to consider 17 Content Analysis, 48 Interviews, or 39 Exploratory Research.

So what about these conversations? I find that the book provides many ways to start the conversation with whichever group you are involving. Each technique is defined at the top of the page followed by examples of how to implement each method/technique and references for further research.

The success of any design researcher is understanding what it is they want to know. The second step is identifying the audience who can provide the information. Third is figuring out which technique is the one most likely to provide the best answer to the questions, which is where this book shines! The graphics, photos, charts, and examples shown on the right page of each two-page spread are clear and used to provide examples or make a point.

This is the second book from Rockport Publishing that I find to be an excellent reference. The only thing I wasn’t crazy about is the title. It might sell better if it were called: Universal Methods of Design Research.

Elisa Miller
Elisa Miller, an STC Associate Fellow, is a senior user experience engineer for GE Healthcare. She is a past president of the Lone Star Community and is an active member of the STC Usability & User Experience SIG.
Opening Standards: The Global Politics of Interoperability


In this collection of fourteen essays, Laura DeNardis brings together the brightest minds in the area of Internet governance and policy to discuss the hard questions about how standards affect each of us, as well as how open standards can encourage trade and innovation, and enhance user satisfaction.

Arranged in four parts, these essays discuss the politics of interoperability; standards, innovation, and development economics; standards-based intellectual property debates; and interoperability and openness. Each essay demystifies a portion of the standards-setting process.

Most of us know casually about what standards are and how they limit us. We understand that different countries might use different electrical standards (for example, 110-volt versus 220-volt outlets). Adapters can help you recharge your electronic devices while traveling. Now that the European Union (EU) is changing to 230 volts, the adapters you have might be useless. While you may encounter a temporary inconvenience or disruption during your travels in powering certain devices, imagine the inconvenience and disruption that incompatible standards for document and interface interoperability could bring to a global community.

DeNardis provides the backdrop for the real social impact of the standards battles. In describing the Open Document Format versus Open Office eXtensible Markup Language (OOXML) dispute, DeNardis places the reader squarely in the middle of Bangalore, India, where a candlelight vigil was held to protest the adoption of OOXML (a Microsoft proprietary format adopted as an ISO standard). The vigil included not only software engineers, but also local vendors who realized how proprietary standards that require vendor-specific software for use, could affect developing nations and less-advantaged citizens.

While some essays are geared toward an Internet governance or academic audience, other essays, such as Updegrove’s “ICT Standards Setting Today: A System Under Stress” that addresses a number of outdated notions that have contributed to problems establishing a level playing field for all users, are accessible to most readers. In one passage, Updegrove says:

Our new, networked world holds unprecedented opportunities for individuals who have hitherto been denied access to modern education, information, and opportunities…resulting in a world where ICT [Information and Communications Technology] access is becoming a prerequisite to enjoying the full rights and opportunities of society, democracy, and the economy. That access is only feasible, however, if standards exist to address local character sets, languages, and physical disabilities. (p. 195)

The idea of the Internet and its bounty being for everyone, regardless of location, income level, or ability, is not new. However, these essays address the changes that must take place to make that idea a reality. Opening Standards is a worthwhile read for anyone interested in knowing more about standards setting and the real causes behind the digital divide.

Doris E. Pavlichek

Doris Pavlichek is a student member of STC who has a BA in Communications and is working on her MS in Technical Communication Management at Mercer University. With a background in network engineering, Doris published two engineering books before joining OPNET Technologies as a senior technical writer.
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<td>Show your employers you are a technical communication leader who is committed to establishing worldwide performance standards for the field.</td>
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<th>Portable Career Credential</th>
<th>A Sense of Achievement</th>
<th>Experience Validation</th>
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<tr>
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<td>Give yourself the confidence to excel at your job.</td>
<td>Certification confirms your experience and competency in technical communication, your commitment to the profession.</td>
</tr>
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The CPTC assessment encompasses broad areas of practice that represent the major activities performed by technical communicators. The certified practitioner demonstrates proficiency in the following areas:

- **User, Task, and Experience Analysis**—Define the users of the information and analyze the tasks that the information must support.
- **Information Design**—Plan information deliverables to support task requirements. Specify and design the organization, presentation, distribution, and architecture for each deliverable.
- **Process Management**—Plan the deliverables schedule and monitor the process of fulfillment.
- **Information Development**—Author content in conformance with the design plan, through an iterative process of creation, review, and revision.
- **Information Production**—Assemble developed content into required deliverables that conform to all design, compliance, and production guidelines. Publish, deliver, and archive.

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