

# Innovation Conversations via Social Media

Malu Roldan, San Jose State University

## Abstract

In their book *Innovation*, Lester and Piore (2004) discuss how innovations emerge from interpretive conversations among customers, designers, marketers, and others. Companies have joined industry consortia and set up company-owned stores (even an entire resort in one case) to encourage these conversations. On the online front, social media is emerging as a significant platform for generating such conversations. For example, blogs, podcasts, and forum conversations are shaping the direction of TV shows and other products of mainstream media organizations. Furthermore, sites like Incuby.com and Second Life are emerging as virtual platforms for testing and promoting innovation ideas. This paper will discuss how social media sites are serving as platforms for these conversations, present findings from a pilot application of these tools in an information technology innovation course, and tips for bringing these tools into the classroom.

## Introduction

This paper will discuss strategies for leveraging the power of social media to support the sharing of ideas and perspectives among diverse participants in an innovation activity. Social media, used interchangeably with the term Web 2.0, includes any digital environment built on the contributions of and interactions among people (Hirschorn 2007). They encompass the range of technologies and platforms that mimic real-life social networking on the digital platform, from myspace and facebook profiles to virtual hookups on Second Life, and social tagging of multimedia content in photosharing sites like flickr and video sharing sites like youtube. Because social media tools are intended to promote participation from a wide range of users, many of them are surprisingly easy to use for average users. This, in turn, has made the technology much more accessible than previous generations of web publishing tools. As a result they suggest great potential for involving groups (e.g., users) that are otherwise excluded from innovation conversations.

Furthermore, social media tools are standard arsenal for today's digital natives—the millennials who many of us currently find in our classrooms (Jayson 2006). Entering their undergraduate years after the turn of the century, millennials have grown up around technology, can't remember life without the internet, and have fueled the boom in social media. They lead lives connected not only in the non-digital world but also in the digital realm, staying in close touch via text messaging, cell phones, online gaming, and social networking portals. Our students' facility with social media technologies presents an opportunity to engage them in innovation conversations and leverage their facility with social media and other technologies to encourage the development of innovations via these conversations. Additionally, by bringing education to their "turf," we may be able to engender a level of engagement that will also encourage students to put more effort into developing fundamental competencies—e.g. writing, quantitative literacy—that will serve them well in a range of activities, including innovation.

This paper will present an overview of how social media can be used to support innovation conversations and report on findings from a pilot application of social media in an information technology innovation course.

## Body

Research findings point to the effectiveness of collaborative communities for engendering innovation (see Winograd 1996 for examples; Lester and Piore 2004, Baker 2006, Shneiderman et al. 2006, Williams and O'Reilly 1998). Highly successful design firms (e.g., IDEO) and products (e.g., Intuit's Quicken, the Apple Macintosh user interface) provide much of this evidence. SAS, a rare company that remains continually creative, underscores the effectiveness of environments that support collaboration by removing distinctions between cultural identities (e.g., "suits" and "creatives") and minimizing bureaucratic and life distractions (Florida and Goodnight 2005).

Lester and Piore (2004) discuss how innovations emerge from interpretive conversations among customers, designers, marketers, and others. Companies have joined industry consortia and set up company-owned stores

(even an entire resort in one case) to encourage these conversations. Companies use settings such as stores to determine which products will be bestsellers and then scale up the production of only these best selling products. Thus, conversations occur not only through users' verbal feedback on products but also through observations of their behavior in direct experiences involving a company's products and prototypes.

Von Hippel's research on user-led innovation shows the key role that users play in innovation conversations. User-led innovation can add value through the involvement of lead users, who not only have deep understanding of a problem domain but also have devised solutions to address those very same problems (Baker 2006; Franke, von Hippel, and Schreier 2006).

Innovation conversations may be supported by social media in the following ways:

- Software tools (e.g., Google Earth) and videos of community member activities and community locations may be used to learn more about a community and its physical conditions before students and other innovators go out into the field.
- Blogging sites (e.g., blogger.com, flickr) may be used to support user-led innovation. Users may upload photos, text, and audio descriptions that depict their daily life experiences from their perspectives. In these early days of social media there are low cost tools that make blogging accessible even to users with limited means. Since many of the free blogging sites support submission of blogs from cell phones via the cellular network, users may be provided with almost free camera cell phones and low cost cell service to facilitate blogging activities from the field. To protect participants' identities and privacy rights, and to encourage candor, sites should be set up to limit access to the blogs. These blogs can also be used as preparation for interviewing community members and as prompts for asking community members to discuss their daily lives and related feelings in more detail—much like paper photos are used in the Community Based Participatory Research technique, photovoice (Strack, Magill, and McDonagh 2004; Wang and Burris 1997). Since the full implications of the use of these technologies are still being determined, researchers working with these techniques need to work closely with Institutional Review Boards to ensure that proper controls and procedures are in place to protect their human subjects.
- Team members can use wikis (e.g., pbwiki.com) to brainstorm, share, and comment on each other's evolving understanding and ideas related to the innovation being developed and the solutions they are trying out. Users may again be included in these wiki conversations to obtain their perspectives on the directions the team is undertaking.
- An online social network (e.g., facebook, Second Life) allows teams to communicate with each other, with other interested students, with faculty members from other disciplines who might provide expertise to the team, with industry and community mentors and experts, and with community members. This may expand the participation of individuals in the conversation by reducing the difficulties of coordinating face-to-face meetings among team members and their partners. This is especially useful when participants may be dispersed globally and operate in different time zones. This online social network could include a virtual showcase room with controlled access that allows teams to demonstrate/showcase prototypes and early versions of their design ideas and solutions to community members, industry mentors, and potential investors.

To assess the viability of social media tools for courses that incorporate innovation activities, the author tested the tools in a fall 2007 course on technology innovation. One of the core goals of the course is to teach students to conduct research on technologies and industries, and then use this knowledge to build a vision of how a specific technology might transform an industry.

Integration of these social media tools into the course was relatively simple and involved little financial investment on the part of the professor or students. Free online tools were used for student blogs and social bookmarking. Specifically, Google's Blogger was used for blogs and Yahoo's del.icio.us was used for social bookmarking. Since most students already had google gmail and yahoo accounts (and if not, could acquire them for free), they had little trouble setting up their blogger and del.icio.us accounts.

Examples of how social media tools were used in the class are as follows:

- Students wrote blogs using blogger.com on the research they were doing and on the ideas generated by their findings. These blogs were intended to help faculty identify areas where students might need more guidance. At

the same time, it was hoped that the visibility (to the entire web) of the blogs would encourage students to place more effort into their searches as well as provide a teaching opportunity for emphasizing responsible use of social media tools and of information gathered using social media sites.

- The blogs were also seen as a way of expediting students through the information search process to arrive at the writing or composition step. As part of the blogging task, students were asked to write about the relevance of their research findings for the technology vision they were crafting. For example, students could write about how a new acquisition by a company they were tracking could impact the company's ability to gain leadership in the commercialization of an emerging technology.
- Students used the social bookmarking site, del.icio.us, to track and tag the resources they found on the web and on limited access library databases (e.g., Proquest). These were intended not only to facilitate proper attribution of quotes and statistics in their final papers but also to encourage them to start digesting and paraphrasing the material they read early on in their research process. Students were asked to write summary descriptions of the articles as part of the information they linked to each reference they identified via the social bookmarking site.
- Aside from indexed, structured information search procedures—such as those provided by library databases and search engines—students were required to undertake less structured searches involving scanning or browsing. While in the past, the newspaper was the primary medium for such scanning, today a variety of options are emerging as alternatives. Two of these were explored in the class. Students were assigned to monitor either a podcast or an RSS feed on a business or technology area. One such podcast is the *Wall Street Journal This Morning*. Students were asked to report on one story a week that struck them as relevant, either to the technology industry in general or more specifically to their technology vision. By sharing these stories in class, students not only develop their communication skills but also become better informed business professionals.
- Students also took on the role of users, participating in a test of a social media site for sharing presentations (<http://chameleon.uwc.ac.za/app>). Students uploaded their presentations and tried out the tagging and searching features of the site. They then wrote about their experiences and suggested improvements to the site in their blogs.

To facilitate review of student blogs, the professor set up folders of the blogs and del.icio.us sites using Google Reader. By subscribing to the RSS feed for each of the students' blogs and del.icio.us sites, the professor automatically received updates to these documents when students uploaded their work. There is also one convenient location for reading the blogs accessible via the web in almost any location providing web access. It was also relatively easy to incorporate the blog listings as a feed in the professor's yahoo homepage and to set up notifications to her mobile phone of updates to the blogs.

To encourage responsible use of social media tools, the course started with a discussion of the importance of managing the quality of online postings associated with one's name. To contextualize the conversations, students were assigned a case reading about a young woman whose chances of landing a plum job were potentially jeopardized by articles from her past involving her participation in public protests on trade policy. The Harvard Business School case, "We Googled You" by Coutu (2007) was engaging for students not only because it addressed an issue they were extremely worried about—starting one's career—but also because it provided a variety of perspectives on the significance of online personae and its proper impact on one's career prospects. It was especially interesting for them to find out how organizations use google to check up on potential hires and learn from the nuanced perspective of someone their own age (one of the commentators on the case) that is conducting research on the use of social media by individuals in their generation.

Student response to the use of these social media tools has been generally positive. Surprisingly, not all of the students entered the class with extensive experience with social media. Eight of the nineteen students in the class reported that they did not have either a facebook or myspace profile in the beginning of the course. Only one of the students had experience with writing blogs as of the first day of class. Most of the students had read blogs and observed their peers writing blogs but had not themselves written blogs. In the first blogs they wrote, students expressed surprise at how easy it was to set up their blogs using the google and del.icio.us tools and

how engaging it was to conduct research using these online tools. Another surprising finding was that students used del.icio.us not only to track resources they had found, as recommended by the author, but they also used it to find resources relevant to the information searches they were conducting.

After six weeks of using the blogs, students were asked to write an essay on their impressions of the social media tools, what they liked and didn't like about them, and how they would improve use of the blogs in their courses. Students remained positive about the tools and provided useful insight for improving their implementation in courses.

Generally, students found the technology easy to use and enjoyed getting familiar with emerging technologies while completing their coursework. Some said that the course activities helped them overcome negative feelings about blogs as purely vehicles for an individual's narcissism, although one student expressed concern that the blogs were too public a forum for course assignments. Some students also said that it encouraged them to write better and conduct more research than they had done in the past. Many said that they enjoyed the experience enough that they would continue to maintain personal blogs in the future, perhaps enhancing their online personae and improving their career prospects. One student was relieved that he had captured his earlier searches in a del.icio.us page, since he could then use the bookmarks to review the material he would need to write a paper halfway into the semester.

Students expressed difficulties with some of the assignments, some preferring more specific questions and others hoping they had a chance to just blog about anything of interest to them at the moment—"What I did this weekend." They expressed interest in finding out more about other students' blogs and suggested assignments where they might comment on their classmates' blogs. Many thought that a forum would be a useful addition to the set of tools used in the class since it would allow them to discuss their ideas with others before writing their blogs. Two students suggested that a private blog site, exclusive to the university, would be make them more comfortable with the tools and assignments. Some of these suggestions may be addressed by comparisons with other social media implementations. To wit, another instructor is experimenting with the use of wikis in a second section of the course. Future work will involve comparisons between the blogging/social bookmarking implementation reported on here and a wiki implementation involving a single wiki that all students from the class can participate in.

Students also showed great initiative in their use of social media. When asked to test a new social media site for presentation sharing, nine of the nineteen students posted blogs about the new site not only on their personal blog sites for the course but also on the blog site for the presentation sharing site they were testing. One of them was quite surprised and encouraged when she received an unsolicited comment from one of the developers of the new site. This test of blogging to provide feedback on an innovation, such as this presentation sharing site, showed blogging's potential for facilitating conversations among innovators, developers, and target users. The presentation-sharing site is being developed in South Africa so the blogs enabled the developers to receive feedback from users in the United States, despite the distance and time zone differences. Furthermore, it was extremely convenient to share the student blogs with developers in South Africa. The author placed the student blogs into one folder in Google Reader and then identified the folder as a shared folder. Google reader then generated a link that the author could send to parties interested in viewing the blogs. Thus, it is fairly easy to combine postings on a topic of interest from several different blogs into a single blog thread/folder and then share the combined postings via a unique web URL.

## **Conclusion**

This initial pilot of social media tools in an innovation course provides encouraging support for their use in the classroom. The findings suggest that the tools are engaging to the current generation of students, despite the constraints imposed on the content and quality of their writing. Many appreciated the fact that they were "forced" to use the blogs since it then made them aware of how much they enjoyed this new way of communicating, so much so that they planned to continue to blog for their own personal enjoyment in the future. As the professor teaching the class, the author found it helpful to find tools that were cost effective, engaging, and easy to incorporate. It was also easy to keep track of student work as new posts were automatically added to her Google Reader folder. In the future, the author is considering having an intermediate, private site that would allow her

to preview students' work and suggest improvements before the blogs were posted, to allow for greater quality control over the blogs. Although the professor felt initially that this would hamper students' creativity, she found out from this pilot that students appreciated the feedback on their work and sought to improve their future blogs based on the feedback.

This pilot also provided reinforcement for the possibility of applying social media tools to wider ranging innovation conversations. The ease with which our tech-savvy students set up their accounts and the very cost effective tools available bode well for the use of these tools to engage users and partners who may not be as tech-savvy or who may not have as easy access to social media tools as our students do. Although it is anticipated that the general public may need more training than students on the use of the tools, it would seem that this training would not need to be extensive and that the tools could be deployed widely to support innovation conversations without incurring prohibitive costs.

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