Chapter 4

Make, Share, Find: Web 2.0 and Informal Learning

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In the last decade of the 1990s excitement bordering on hysteria contributed to what was referred to as the "New Economy." Fueled by the proliferation of personal computers and Web-based "dot-com" technology, the NASDAQ Composite soared 4,000 points in the years between 1995 and 2000. Inevitably, the dot-com bubble burst and in the months between March 2000 and October 2002; the NASDAQ Composite shed almost 80% of its value. As Web technologies evolved in the aftermath of the collapse, a subtle but important shift began to take place in the nature of the Web. In simple terms, the Web moved from being static to dynamic. People started to refer these new dynamic technologies as Web 2.0 (to distinguish them from those that proliferated during the dot-com era) because they signified a shift in which anyone could publish content to the Web. Thus, one of the key differences between Web 1.0 and Web 2.0 is that content is now largely created by day-to-day users and not a select group of web developers. Web 2.0 can be defined as: Web-based tools and systems that enable the creation, dissemination, and acquisition of user created content. However, I think that Web 2.0 can be further distilled into three words: Make, Share, Find.

Perhaps the most well known examples of Web 2.0 are social networking sites like MySpace, Facebook, LinkedIn, YouTube and Flickr Web sites like these enable users to actively communicate, collaborate, create, and share content with people all over the world. The rapid adoption of social networking has been nothing short of phenomenal. For instance, as of April 2009, Facebook claims to have 200 million active users.

The growth of Web 2.0 can be attributed to its natural characteristics, these include ease of use, low cost (in many cases they are free) and user enjoyment. Given the huge growth and participation in Web 2.0, learning professionals at all levels of education have begun to question how these Web 2.0 applications can be used for learning purposes.

Formal vs. Informal Learning

Educators—whether in K12, higher education, or corporate spaces—tend to focus on formal learning that involves such things as content delivery, practice, feedback, assessment, and evaluation. However, learning is a natural human cognitive process that is constantly occurring whether someone is in a formal learning setting or not. A simple example of this is how toddlers learn to speak their native tongue. They may be "coached" by parents and family members but barring physical deficits there are no formal classes necessary to learn to speak. This type of learning has been defined as informal learning.

One study conducted on informal learning in the workplace found that employees acquire 70 percent of job related knowledge from informal learning activities (Cofer, n.d.). It is probably not a great stretch to infer that a similar amount of informal learning takes place across all settings, populations, and age groups. What this suggests is that we are spending the majority of our time and resources on the smallest segment of learning when we are focusing on formal learning rather than day-to-day just-in time informal

learning. Further, Web 2.0 applications continue to support and encourage informal, just-in-time, learning.

Learning and Web 2.0

Learning is happening everyday on the Web. This should not surprise us; both Bloom's Taxonomy and social learning theory provide a solid rationale for why this is the case.

Bloom's Taxonomy

Educators are often very familiar with Bloom's taxonomy. Bloom's taxonomy is a model used to classify levels of thinking. During the 1990's, Anderson and Krathwhol (2001) revised Bloom's taxonomy (see Table 1) placing analyzing, evaluating, and creating as the highest levels of thinking. Web 2.0 applications and the subsequent practice of engaging in Web 2.0 activities tends to involve these higher levels of thinking. For instance, perhaps one of the quintessential characteristics of Web 2.0 applications is the focus on creating. That is, whether you are referring to the original or the updated version of Bloom's Taxonomy, it is easy to make the case that this area of Web 2.0 participation includes the highest levels of the cognitive domain. Creation is a synthesis of disparate elements organized into a meaningful whole. Implicit in this activity is the analysis of components and the evaluation of outcomes.

Table 1. Bloom's Taxonomy

Original version	Updated
Evaluation	Creating
Synthesis	Evaluating
Analysis	Analyzing
Application	Applying
Comprehension	Understanding
Knowledge	Remembering

Social Learning Theory

Just like Bloom's Taxonomy, Social Learning Theory provides an explanation for why Web 2.0 applications, and the daily practices that these applications encourage, not only support but also encourage learning.

Lev Vygotsky's Social Learning Theory suggests that social interaction is fundamental to cognitive development and that socio-cultural relationships are an initial step to acquiring knowledge. Similarly, Bandura's theory of Social Learning suggests that people learn vicariously by observing the actions and results of others. And finally the work of Lave and Wenger on situated learning highlights how learning is highly contextual and always situated in a community of some sort.

All three of these different theories of social learning point to the important role that social interaction, context, authentic activities (e.g., the act of creating), and social communities of practice play in learning. Web 2.0 applications and their emphasis on making, sharing, and finding things aligns very naturally with social theories of learning.

Formal Strategies for Informal Learning

The Make, Share, Find characteristics of Web 2.0 applications should encourage educators to think differently about how they support learning. I will touch on a few formal strategies educators can use to support informal learning. It's important to note

though that educators who find comfort in controlling the learning environment are going to have to let go and act as enablers of learning rather than providers if they are to effectively leverage the strengths of Web 2.0 applications.

Make

As mentioned earlier, Web 2.0 applications allow and encourage users to make and create. Therefore, educators can use these applications to foster an atmosphere that supports creativity of all kinds. For instance, educators can encourage or even require students to make and create content in blogs and wikis to help learners verbally process information. Often all educators need to do—especially when trying to support informal learning—is to provide a skeleton structure to get things started.

Share

Another great opportunity for educators is to connect learners, whether in formal or informal learning settings, with other learners; that is, help learners get connected with their own community of practice. One way to do this is by setting up a Ning or using Twitter but other ways might include creating a delicious account(s) for learners to share resources.

Find

Finally, the Web is full of information. Helping students develop and incorporate effective searching and finding strategies on the Web can help support just-in-time informal learning. Further, Web 2.0 applications like Delicious and Diigo help users bookmark resources found and share with others as needed.

Putting It All Together

The great promise of Make, Share, Find is the ability to tap into and leverage the content created by users for learning purposes. For example, a new employee training program might include a link to the CEO's blog. In a similar fashion, a "Mashup" — the integration of another program like Google maps — could be used to show student locations in a distance learning program. Content that is subject to frequent changes can be created online (e.g., in a Wiki) and learners can then use RSS to keep up-to-date on any changes. Finally, course ratings of college Web-based learning courses and programs could appear in the social network side along with user recommendations.

Educators at all levels need to abreast in the developments that are taking place in Web 2.0. The Make, Share, Find of Web 2.0 ties into and supports a wide variety of learning activities and outcomes. To fulfill the potential that exists in Web 2.0 learning, it is necessary for educators to develop new skills and competencies. To make the most of the opportunities it presents it is necessary to move from a narrow tactical approach focused on observing measurable results into one that is strategic, consultative, collaborative, and content with unexpected outcomes.

References

Anderson, L.W., & Krathwohl (Eds.). (2001). A Taxonomy for learning, teaching, and *assessing: A revision of bloom's taxonomy of educational objectives*. New York: Longman.

Cofer, D. A. (n.d.). Informal workplace learning. Retrieved from http://www.inspiredliving.com/business/wkplace-lrn.htm

Bio

During the course of his tortuous career (which pre-dates the Internet), Phil Antonelli has worked as an artist, politician, middle school teacher, and instructional designer. For the past fifteen years, he has created instructor-led and Web-based training for corporate, university, and K–12 audiences. He is a gold medal recipient of an Excellence in Learning award from Brandon Hall in the area of blended learning. He lives in Denver where he is employed as a Senior Instructional Designer by ACS Inc.