Chapter 5
Bridging Informal and Formal Learning: Experiences with Participatory Media

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ABSTRACT

What is “one Wikipedia’s” worth of time and effort outside of school? About 100 million hours of free labor, which illustrates one of the features of participatory media. How can formal education take advantage of the new digital media, Web 2.0 and the like? This chapter describes the architecture of participatory media and the transition in formal education needed to mine the spare time and effort of learners. Bringing participatory media into formal education necessitates a redesign of learning institutions as well as the art of teaching. At the same time, as unobtrusive performance assessment improves and becomes available, new information can enhance formal education by making clear the educative value of digital experiences outside of school. Teachers who are trained to travel both ways on the bridge can be highly effective in creating new learning experiences that function as spreadable media appropriated by teens and others in a myriad of new ways in the emerging participatory culture of schools of the future. The game-based learning framework of The Global Challenge Award program is used to illustrate the framework of the participatory media bridge between informal and formal education.

INTRODUCTION

The trend in Web-based software toward participatory media that is exemplified in Web sites such as YouTube, Facebook and Wikipedia, is a result of the “cognitive surplus” (Shirky, 2008b) plus the social networking of participants. That surplus is in turn, based on people’s informal free time, which in today’s youth culture, is increasingly spent playing games and creating personalized content on the Web. Clay Shirky’s “back of the envelope” calculation, which he worked out with Martin Wattenberg at IBM, is that all of Wikipedia — “the whole project-every page, every edit, every talk page, every line of code, in every language that Wikipedia exists in [about 190] — represents something like the accu-
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mulation of 100 million hours of human thought” (Shirky, 2008a). In contrast, the time people spend watching television consumes 2000 “Wikipedia projects” per year in the U.S. alone! Therefore, only a small a fraction of the informal cognitive surplus is involved in creating and sustaining the world’s largest encyclopedia (and with only eight employees) (Perrien, 2008). How much of this cognitive potential are formal educators tapping?

Unfortunately, formal educational environments pose several barriers to the use of participatory media in schools. The hallmarks of the new technology—active creation of personalized online content and fluid communication networks—don’t fit well with a traditional school’s authoritative control of learning objectives, chronic lack of time, inadequate access to high-end technology, and the limited range of effective use of technology found in most classrooms (NCES, 2000; Tomorrow, 2001). For example, the 2007 findings of Project Tomorrow’s annual “Speak Up” survey of students, teachers, parents and administrators notes that during school, students in grades 6-12 are using technology for these top 5 activities:

- Writing assignments (74%)
- Online research (72%)
- Checking assignments or grades online (58%)
- Creating slideshows, videos, web pages for schoolwork (57%)
- Email or IM with classmates about assignments (44%)

Meanwhile, outside of school, it is a completely different story. The first national survey on “Teens, Video Games and Civics” by the Pew Research Center (Pew, 2008) finds that virtually all American teens play digital games - at least half on any given day - and those experiences are rich and varied, with a significant amount of social interaction and potential for civic engagement. Students in the Speak Up survey (Tomorrow, 2007) report on their regular use outside of school:

- Gaming – over 64% of students in grades K-12 play online and/or electronics based games regularly
- Download music – This #1 activity by middle and high school students mirrors increases in MP3 usage
- Social networking - 40% of middle school students and 67% of high school students have a personal website (Facebook, MySpace, Xanga) – most popular activity on that website: emailing with friends
- Communications (email, IM, text messaging) – while over 50% of all high school students use these tools regularly, girls’ use outpaces boy’s use by an average of 12 percentage points

Let’s not forget that mobile devices outnumber computers 3:1 today (Perrien, 2008) and most students have one or more of these devices. The broad surveys such as the Pew study and the annual “Speak Up” data collection haven’t begun to ask about mobile devices yet!

These broad survey sources provide evidence that Gen-Y students are producing content and using graphically rich social media in their lives outside of school, but their teachers are for the most part unaware of and not tapping into or using this activity to advance learning. For example, the #1 use of technology by teachers (51%) is assigning homework or practice work. Teachers in the “Speak Up” survey report this about their use of technology:

- 93% use email to communicate with colleagues or parents (only 34% email with students!)
- 59% create a Powerpoint presentation
- 35% create or listen to podcasts or videos
- only 21% maintain a personal website like MySpace or Facebook