Gaga for Google in the Twenty-First Century Advanced Placement Language Classroom

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Abstract: The migration of online educational needs to tools like Google applications, coupled with the realization that today's twenty-first-century students are digital natives who have lived their entire lives exposed to current technology, forces educators to find ways to use technology to enhance traditional curriculum. In this article, the author examines how one program, Advanced Placement Language and Composition, incorporates Web 2.0 tools including several Google Applications (Gmail, Docs, notebook, personalized homepage, Web pages, calendar, blogger, and talk) into its high school curriculum. Furthermore, the author addresses the gap between students and teachers that occurs cross-generationally in a discussion of successful technology best practices in teaching and learning as seen by a baby boomer teacher, a Gen X teacher, and the N-Gen students taught daily.

Keywords: advanced placement language, digital natives, Google

Change is sweeping the nation as more universities, colleges, and high schools move their online communication needs to Google (Young 2006). Locally, Arizona State University and Mesa Community College have transferred their systems to Google. Although these portals still resemble their former systems, the IT departments now run their servers on Google's power. Although digital natives (Palfrey and Gasser 2008; Prensky 2001) embrace Google and the public nature of relinquishing their online identities to online companies, many IT departments still retain in-house mail services for faculty and staff for privacy and security (Educause Learning Initiative 2008). Today's Internet generation (N-Gen; Tapscott 1998) has grown up in the digital age in which the rapid adoption of innovative technology creates a digital divide between them and Generation X and baby boomer teachers. As a Gen-X teacher, I struggle to discover ways to adapt and develop curriculum to meet the needs of my twenty-first-century N-Gen students. This struggle led to the Google application suite and its powerful, innovative tools that enhance the pedagogical experiences in my Advanced Placement (AP) Language and Composition classroom.

In spring 2007, my colleague Shirley Crabtree, a baby boomer, and I were searching for ways to make our curriculum more meaningful to the N-Geners in our AP classrooms. As an adjunct instructor at Mesa Community College, I stumbled across the term *Web 2.0*. Although this term at first appeared to be a new buzzword, I later discovered that Web 2.0 refers to the paradigm shift from a unidirectional Web 1.0, in which information was presented to the viewer in a static venue, to our current bidirectional model that promotes and encourages communication and interaction through user-generated content. After commiserating with a fellow professor, she suggested I reexamine Google for my needs. I scoffed at the idea that a search engine could provide the instructional technologies that my southern Chandler, Arizona, high school needed, but I soon realized that Google's application package

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has recently evolved into a robust pedagogical tool that I could implement in my classroom.

Although my student base is predominantly upper-middle-class Caucasian, many of whom have access to multiple computers in their homes, they still balked at the idea that I expected them to set up new Gmail accounts that they did not already have and regularly use. The basic Gmail account gives students access to the following:

- Google Search, one of the most powerful search engines on the Internet
- Gmail, a seemingly limitless Web mail data and storage system
- Google Groups, an asynchronous threaded discussion
- GTalk, a chat system built directly into Gmail
- Google Calendar, a powerful multiuser calendar
- Google Docs, an online (and more recently offline) document, presentation, and spreadsheet generator
- iGoogle, Google's personal Web portal

I convinced Crabtree that this idea would work, and I promised to discover ways to narrow the generation gap between my baby boomer colleague and our N-Gen students. Although the students initially opposed opening a Gmail account because most already had Hotmail, Yahoo, or Cox (a local cable subscriber) accounts, I explained that many of the local colleges in Arizona (including Arizona State University and the Maricopa Community College District) have already begun using Gmail for their student e-mail provider. In the first two weeks of the semester, we convinced all 180 AP Language and Composition students to create Gmail accounts.

Initial instructor setup took some time (generating mailing lists, inviting all the students to Google Groups, adding everyone to shared classroom calendars, and giving face-to-face assistance to students who needed more support setting up the accounts), but once the Google applications were organized, communication between all 180 students became almost instantaneous. Google affords the students a powerful, free, robust system that balances synchronous and asynchronous communication in a decidedly twenty-first-century classroom.

Twenty-First-Century Classroom Tools

The flattening of the world, as Friedman (2006) remarked, suggests that educators refine their pedagogy to effectively use technology, and as Crabtree remarked when one student complained about being required to check her Gmail at least every forty-eight hours, "it [technology] ain't going anywhere!" Over the course of the 2007–8 school year, I began to explore ways in which Google applications could better address the needs of our classrooms.

Google Search (http://www.google.com)

Google search has gone the way of Kleenex, Q-tips, and Coke, as educators overhear students saying, "I need to google this" or "I need to google that." As Google has become the most powerful search engine in our lifetime, our culture has appropriated the term *google* as a synonym for Web searching. The Google servers currently process one petabyte (1000 terabytes) of data every 72 minutes (Anderson 2008), and Google includes a near limitless number of Web sites, images, books, scholarly articles, discussion groups, physical addresses, and databases. In our classes it has become the only search engine we use, partly because of its ability to organize searches into categories such as videos, images, scholar, government, and blogs.

With a pedagogical philosophy of teaching students how to research smarter rather than harder, we evaluate the Web sites by assessing their educational merit (e.g., giving priority to university Web sites, reviewing references found on the sites for further research, and being wary of commercial sites) rather than gleaning extraneous information from any Web site put online by anonymous users (Brabazon 2007). Google search has the advanced search capabilities and filters to assist our students with that type of search and assessment.

Gmail (http://www.gmail.com)

Gmail, Google's free Web mail system, has created a new Web mail tool by providing a powerful search engine for e-mail and contacts, a built-in chat system, and the ability to connect to Google Calendar and Google Docs. Google's simple e-mail application uses several built-in tools that add to this powerful communication tool. Google's labeling system tags e-mails in a variety of ways simultaneously. For example, an instructor who receives an e-mail from a student about an AP college essay could tag it as AP, student work, college essay, and comment and return. If the instructor then searched each of the labels individually, the e-mail would appear in each search; once the instructor finished with the essay, he or she could disassociate the comment and return tag.

The user can also check multiple e-mail accounts through one Gmail address, and Gmail seamlessly syncs directly with other e-mail applications such as Outlook, Mail, Thunderbird, and Entourage. Moreover, Gmail has over seven gigabytes of space for e-mail, attachments, and contacts, whereas other e-mail systems force users to pay for extra space. In an age of proliferating litigation, instructors can keep a database of all e-mail to better share information with students and therefore increase their understanding and learning and to better organize all communication records yearly. In the AP language course, instruc-

tors use Gmail for announcements and instantaneous dissemination of information. During cooperative learning projects throughout the year, the students use Gmail coupled with Google Docs and Google Talk to collaborate on assignments.

Google Groups (http://groups.google.com)

Google Groups is Google's version of the ubiquitous discussion boards in every online course management system. This discussion board application permits invited users to initiate threaded posts to which members reply. The instructor sets privileges that include allowing students to edit or delete their posts, marking posts for later review, or locking posts to terminate off-topic discussions.

Although this application's features are not as effective as some of the others, we did find that students spend more time replying to each other on the groups when they were not assessed. The freedom to discuss the material on their terms and the instructor's understanding that they would occasionally veer off topic encouraged more fruitful and reflective discussion of topics covered in the classroom. In my experience, all topics had multiple posts from various users and some threads grew to more than 100 posts in fewer than twenty-four hours. Discussions range from SAT strategies and specific assignments for courses, to the kick-off time of Friday night's football game. It is important to note that Google Groups not only allows students to continue discussion outside of class, but also encourages collaboration and discussion with students in different sections of the same course. Specific groups can be set up as closed systems in which users must be invited to write and read posts. Although Google Groups is still clunky for students who are afraid of technology (e.g., it does not default to a threaded discussion), one of Google's strengths is that their applications are in perpetual beta with constant updates.

Gtalk (http://www.google.com/talk)

Gtalk, an online chat system, is embedded directly into Gmail. Gtalk allows users to chat with one another in real time. When replying to e-mail, if a student is online, I can reply in chat mode, which provides them instant answers to their questions. If I am not online, students can talk to one another online (individually or in group chats) and answer each other's questions.

Each quarter, our AP language course focuses on large cooperative-learning projects that require group work. At the start of the semester, we gather the students' Gmail addresses to build a database that we share with them. Students can then use this database (housed in Google Docs) to access each other via Gtalk. The importance of this synchronous communication is evident in helpful communication or questions answered immediately. Through synchronous communication, two things occur: the instructor has the ability to answer questions anytime he or she is online, if he or she chooses to do so, and the hallway chatter indicative of traditional brick-and-mortar classes moves online.

Google Calendar (http://www.google.com/calendar)

Google Calendar is an online multicalendar application that includes limitless color-coded calendars in which events can be scheduled indefinitely. Calendars can be shared in read mode or read and write mode, and owners can invite other users to events.

Since the inception of the AP program in 2004, we had given the students paper calendars for each quarter. During the 2007–8 school year, we implemented Google Calendar, which effortlessly synchronizes with Outlook calendars, Apple's iCal, Entourage, and Smartphones or PDAs. We use Google Calendar's share feature to share read-only calendars so students have full access to the class schedule for the year. In share mode, collaborators sharing in read and write mode—in this case coteachers—can edit, change, and view the calendar at any time, including sending "evites" and setting reminders that pop up on their computers or remind participants via text message on their cell phones.

Google Calendar also has a feature that allows users to embed the calendars on public Web pages. This is instrumental for parents who want to keep abreast of their student's class schedule. A simple Web page with an embedded Google Calendar automatically syncs every time instructors make changes to the course calendar, thereby, eliminating the need to include disclaimers that calendars are subject to change. Google applications move seamlessly from one to another, and Google's color-coded label system allows students to easily organize their classes and extracurriculars in Google Calendar. Students quickly realized the application of Google Calendar beyond the AP language course; they set up calendars for other classes, extracurricular activities, sports, and part-time jobs.

Google Docs (http://docs.google.com)

Google Docs is an online word-processing, spreadsheet-developing, and presentation-generating tool that includes a free storage repository. Although a large number of our AP language students have computers at home, Google Docs appeals to them. Students who do not have access to Microsoft Office applications or are not permitted to install Open Office (a free alternative to Microsoft Office) on their home computers can use Google Docs for free from any computer in their homes, school, or public library.

Google Docs currently permits three gigabytes' worth of free storage that assures students will not lose files for school. Students can no longer make excuses about losing their work or deleting their homework accidentally. Moreover, Google Docs has a share option that

encourages collaboration, peer editing, and instructor grading inside the application. In the past, we shared files with our AP language students and asked them to give their feedback, much like a wiki page. On one file shared in Google Docs in collaborate mode, the students produced more than twelve pages of collective work in fewer than twenty-four hours. This voluntary work was an extension of class discussion. Although traditional word processing occurs in front of a single computer, this document was developed through group editing by synthesizing the comments of several students who were physically miles apart. The comment feature in Google Docs easily identifies the commenter and includes a time and date stamp, and the revision history retains a copy of all changes on any file in the application.

Although collaborate mode permits users to edit files, this is not ideal in all situations. Instructors can share project instructions and rubrics in view mode. In view mode, documents, presentations, and spreadsheets are accessed as read-only files. By sharing documents and keeping them online, students can access them anytime. Google Docs has essentially eliminated all paperwork from our courses.

iGoogle (http://igoogle.com)

iGoogle, a personal Web portal, uses real simple syndication (RSS) to feed news, widgets, and other information to one centralized location, rather than requiring the user to surf several Web pages. Through the proliferation of information in the twenty-first century, the collection and synthesis of information becomes imperative in our daily lives. RSS has streamlined this process. By generating iGoogle portals, students can pull in various RSS feeds from personal e-mail, local news, and academic interests and studies. In our academically challenging world in which time is a precious commodity, iGoogle not only focuses RSS feeds to one place, but also centralizes Google Calendar, recent Google Docs, Gmail, and Gtalk. In our high school classroom, we did not require the use of iGoogle, but many students did use it.

Twenty-First-Century Teachers and Classrooms

As noted earlier, I am a Gen-Xer, a digital immigrant to this new technology. I remember computer games on the old Commodore 64 hooked up to a black-and-white television in my bedroom. I recall my father giving me my first personal computer (an 8086 processor) when his office upgraded their systems. I have always tinkered with technology, and I keep my finger on the technological pulse of the N-Geners. Meanwhile, my colleague Shirley Crabtree is my parents' age, a baby boomer, whom I convinced that the implementation of these tools would strengthen the program. In the last year and a half, I taught her to use the aforementioned Google applications and proved to her their pedagogical usefulness. This is just one example of how we may begin to close the digital divide.

The notion that in more affluent schools, the digital divide between teachers and students is smaller due to available resources for training and technology is false (Tapscott 1998). In reality, the schools are handicapping these innovative tools, which is leading to a participation gap (Jenkins 2006). The upper-middle-class school in which I teach has technology: computers across campus, projectors and document cameras in every room, and wireless tablets. But the implementation of Google applications in the classroom is not the norm for the school, and although younger teachers are more eager to implement technology, when it comes to applying it in their classes they often fall short. The digital divide has nothing to do with the age of the instructors. Innovative technologies must be coupled with reteaching and reorienting our educational professionals (Prensky 2005). Although Crabtree's age may define her as a baby boomer, she uses more technology than most of the other twenty-four teachers in our English department.

The digital divide between the haves and have nots, the traditional baby boom teachers, the Gen-Xers, and our twenty-first-century students, as well as the emergence of the Jenkins participation gap (2006), needs to be addressed. By examining past successes using technological innovation in my AP language classroom, I can demonstrate how to implement these tools in other classes and disciplines, which can begin to close the divide. Web 2.0 is a space of collective intelligences, and the traditional process of learning has moved online. Staff development needs to adopt a multimodal approach that includes the use of videos, podcasts, and screencasts, as well as other Web 2.0 tools such as Google applications to demonstrate how to meet twenty-first-century students on their terms and their turf, beyond the classroom walls and in a borderless realm of learning. This is an era in which educators must acknowledge and build on the practices and processes students now use. Schooling is no longer defined by 1950s schoolhouses looming over middle America. Today's students embrace a tech literacy that many teachers overlook, ignore, or fail to embrace as wholeheartedly as the students do (Jenkins 2006; Prensky 2005).

Educators need to incorporate tech literacy not only in vertical teaming scenarios but also through interdisciplinary and district-wide workshops. Through his discussions of participatory culture, Jenkins (2006) argues that students lack core social skills and cultural competencies to interact in the twenty-first-century mediated landscape. This concern includes classroom

instructors; however, through strategies like the one outlined in this article, the perceived digital and tech-literacy divides can be significantly narrowed.

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