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Google Spreadsheets and real-time assessment

Instant feedback for library instruction

Assessment is a big deal in everything these days. We're assessing user needs, usability data, the environment, even community needs. No academic library can dodge the assessment bullet for long and expect to stay accredited. And our library instruction sessions are at the top of that list. I tried the simple three questions on the notecard approach to assessment—What did you learn? What are you still unclear about? Anything further?—which worked well, but was a lot to review, compile, and transcribe.

Then there are the online quizzes or polls that are very popular today. Through Google Forms or Poll Everywhere students can respond to the same questions and the results are compiled and organized online. This results in less work and no lingering notecards on the desk. I like all of these approaches. However, there is one huge thing that has always bothered me about most assessment practices. Even with the "right" assessment tool, changes that I make to my instruction sessions will only affect the *next* class in the *next* semester.

So, despite the few occasions when a student might e-mail me for help, or the rare occasion when a student might make an appointment for a private consultation (or the even rarer occasion when a faculty member schedules us for multiple sessions), it is almost always too late for the students *giving* the feedback to benefit from the changes. I knew there had to be a more efficient way I could assess how students were doing and respond to their needs before they disappeared out of that classroom door.

Discovering how others use Google Docs

I stumbled upon the answer quite by accident. A couple of colleagues were meeting on how they use Google Docs in their classrooms. Since I managed through library school with only a netbook and no Microsoft Office software, I had become fairly familiar with using Google Docs to write papers or create presentations, but I was unfamiliar with instruction applications.

One colleague explained that she asked students to work in groups and fill out a Word document with three or four pre-filled questions to assess learning. Another uses the Google Docs "Form" as a sort of exit-ticket from her class. She posts a link, and they fill out the quick assessment survey before leaving class along with their e-mail addresses. Since talking to her, I've become aware of a number of other librarians that use this same format. I also discovered that there are more and more ways academics are using Google Docs in their classrooms.

These librarians are capitalizing on one of the unique features of Google Docs; real-time multiple users. Unlike some online questionnaires, Google Docs allows up to 50 multiple users to access one document at the same time. My colleagues also explained that facilitators can see the results instantly, and

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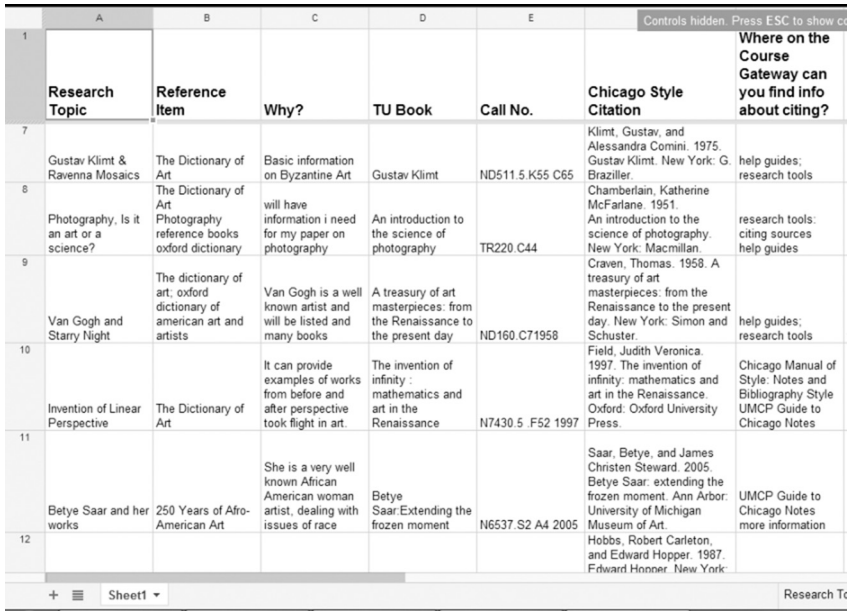
collaborators can watch changes others are making. I was intrigued.

I thought the Word-format evaluation tool had great potential. I liked the idea of having the students answer questions as they go along in the session—a lot of us do that with worksheets. The difference with Google Docs, is that the facilitator can see the student's responses. Instead of needing to turn anything in at the end of class, all of the work is completed and

It's a pared down version of the capabilities of an Excel spreadsheet, but all I needed. I decided that students would have to fill out an assigned row with information they find from the tasks listed at the top of each column. What I found was a great way to watch the students work and process the information I was dishing *in real time*. This allowed me to not only watch the process, but also to correct or make suggestions in the moment, as well.



	A	B	C	D	E		
1	Research Topic	Reference Item	Why?	TU Book	Call No.	Chicago Style Citation	Where on the Course Gateway can you find info about citing?
7	Gustav Klimt & Ravenna Mosaics	The Dictionary of Art	Basic information on Byzantine Art	Gustav Klimt	ND511.5.K55 C65	Klimt, Gustav, and Alessandra Comini. 1975. Gustav Klimt. New York: G. Braziller.	help guides; research tools
8	Photography, Is it an art or a science?	The Dictionary of Art Photography reference books oxford dictionary	will have information i need for my paper on photography	An introduction to the science of photography	TR220.C44	Chamberlain, Katherine McFarlane. 1951. An introduction to the science of photography. New York: Macmillan.	research tools: citing sources help guides
9	Van Gogh and Starry Night	The dictionary of art; oxford dictionary of american art and artists	Van Gogh is a well known artist and will be listed and many books	A treasury of art masterpieces: from the Renaissance to the present day	ND160.C71958	Craven, Thomas. 1958. A treasury of art masterpieces: from the Renaissance to the present day. New York: Simon and Schuster.	help guides; research tools
10	Invention of Linear Perspective	The Dictionary of Art	It can provide examples of works from before and after perspective took flight in art.	The invention of infinity : mathematics and art in the Renaissance	N7430.5 .F52 1997	Field, Judith Veronica. 1997. The invention of infinity: mathematics and art in the Renaissance. Oxford: Oxford University Press.	Chicago Manual of Style: Notes and Bibliography Style UMCP Guide to Chicago Notes
11	Betye Saar and her works	250 Years of Afro-American Art	She is a very well known African American woman artist, dealing with issues of race	Betye Saar:Extending the frozen moment	N6537.S2 A4 2005	Saar, Betye, and James Christen Steward. 2005. Betye Saar: extending the frozen moment. Ann Arbor: University of Michigan Museum of Art.	UMCP Guide to Chicago Notes more information
12						Hobbs, Robert Carleton, and Edward Hopper. 1987. Edward Hopper. New York:	

Sample spreadsheet from an instruction session. Visit this article online for more detailed image.

available for the instructor by the close of class. I also liked my colleague's exit ticket idea, in that students could provide further questions and the librarian could respond via e-mail. However, I still felt like there was a missed opportunity *in* the classroom. I wanted to see each and every step that I model in the research process, replicated by the students in my classroom while they were doing it. I didn't want to have to ask them for responses or politely wait until the end of class in order to see where they may have been stumped.

Creating and using Google Spreadsheets

When my wheels got turning, I decided I wanted to use the Google Spreadsheets format.

Basically, I model a searching behavior and then I have a corresponding task listed on the top of a column on the spreadsheet. Using their given research topic, the students replicate the behavior and enter the found information in a corresponding cell. We start with easy tasks and get more complicated towards the end of the session. Most of the tasks are based on the learning outcomes I've listed for the class.

I start with simple requests, like asking them for their research topic, then I'll begin the session by giving them an overview of materials and showing them some general reference items. I then will have them choose a reference item from the resources I've introduced and explain why they feel it

will help them with their topic. For example, row 1/column A might say, "Research Topic," row 1/column B might say, "Reference Item," row 1/column C will say, "Why?" and on and on.

Why it works

There are so many reasons, a lot I didn't foresee, as to why this is great for the classroom. First of all, the students have to pay attention the whole session in order to stay on task. Since they can see each other working on the spreadsheet (though you can arrange things to be anonymous), they don't want to look like they don't understand in front of their peers, so they really pay attention. I realize that this could be a double-edged sword, as some students may feel anxiety to perform in front of their peers, but I have yet to see this as a hindrance for any student completing the spreadsheet.

Second, the items on the spreadsheet directly correspond with learning outcomes for the instruction session along with the tasks they need to complete for their assignments. Since they are actually completing work that they will eventually turn in for a paper or assignment they have enough personally invested to pay attention and work through.

Third, the students can access the URL for the document again after class. If they've forgotten the name of the book, or the citation for the article, all they need to do is return to the spreadsheet. There is a "share" option in all of the Google Docs formats. It not only allows multiple users to edit the document, but provides a URL in order to do so. (I always customize and shorten the URL at tinyurl.com.)

Fourth, the professors love it. They remark every time I've used in it class about how impressed they are. They track the spreadsheet and watch what the students do as we go through class. Some of them even offer suggestions based on what they see students enter on the spreadsheet. They really appreciate the functionality of being able to watch everything in real time. In fact, the occasional professor that can't make it to class is always effusive when I send them the link to the document and they can see what the students completed in class. It's a great way to show value.

Lastly, and perhaps most importantly, now that I've gotten the hang of the sometimes high-level of multitasking required (especially if you have a PowerPoint in addition to showing pages and tasks on your library Web site), I can watch the student results and re-direct or re-explain when it's clear that multiple students are not understanding a concept, or I've simply missed an important point.

Challenges

While there are challenges to conducting an instruction session in this manner, it also has a great deal of potential. One of the biggest challenges is that it does take getting used to with all of the multitasking required. I'm usually toggling between the library Web page and the online course guide, while showing a PowerPoint and watching the Google spreadsheet to make sure everyone is on task. This was overwhelming the first time I tried. It takes a few sessions in order to feel comfortable. A colleague that is excited but hesitant to try the spreadsheet in her class came up with a wonderful solution. She's enlisting the help of the class' professor. She's explained how the spreadsheet works and asked the professor to keep a close eye on the content the students are entering so that there are two sets of eyes watching the students work and guiding them through the session.

Another challenge is with students that may be technology challenged. While I've only had a couple of students that found using the Google spreadsheet an overwhelming and new concept, it still requires mentioning. Since I've found this to be an occasional case with nontraditional or returning students, I want to come up with a way to help them. Many may already feel subconscious regarding their age and lack

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needs of disabled students and develop collections and services to meet these needs;

• purchasing audiobooks, closed captioned video materials, and other alternative media and technology to supplement traditional library collections; and

• additional training for reference staff in assisting with library research and instruction to those students with learning disabilities.

These three groups form only a small segment of the diverse groups of students at a college or university campus in the 21st century. As academic libraries seek to meet diversity goals, we must look beyond the "traditional" facets of diversity and strive to meet the needs of a diversifying population. It is only through this process of "diversifying diversity" will we truly meet the needs of all students.

Notes

1. Michael J. Cuyjet, Mary F. Howard-Hamilton, and Diane L. Cooper, eds., *Multiculturalism on Campus: Theory, Models, and Practices for Understanding Diversity and Creating Inclusion* (Sterling, VA: Stylus Publishing, LLC, 2011), 13.

2. Ibid., 2.

3. Susan M. Headden, "'Adult-ed' Grows Up: Higher Education Seeks to Better Serve Increasing Numbers of Nontraditional Learners", Lumina Foundation Focus, Fall 2009, www.luminafoundation.org/wp-content/uploads/2011/02/Focus_Fall_2009.pdf.

4. Laura Horn and Stephanie Nevill, *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003–04* (Washington, DC: National Center for Education Statistics, 2006), http://nces.ed.gov/pubs2006/2006184_rev.pdf.

("Google Spreadsheets...," cont. from page 530)

of ease with technology to begin with. I've been fortunate to find that many of these students will go out of their way to set up one-on-one research sessions. However, I would still like to help them feel accomplished in their research as we move through the session.

In response, I may have a few paper versions of the spreadsheet available. I can pass this out to any student who gets lost.

Another challenge that I've found is the same with every librarian regardless of the class format, and that's over tasking the session. In fact, my first spreadsheets just had an enormous amount of high-level tasks to complete. Based on what I watched on the spreadsheets, these sessions required a lot more instruction and less hands-on activities, which is exactly the opposite of what I wanted.

While I still fill them with lots of tasks, I try to make sure that they're incremental and result in more practice of skills and critical thinking. As a result, they seem to make better mistakes and more intelligent entries when we move through the class at a one-step-at-a-time kind of pace.

Conclusion

If you are at all like me and also had that same nagging feeling that you could help students more if you could only see and assess what they were doing while in your classroom, then I recommend jumping right into using the spreadsheet.

With so much transparency you will have a hard time returning to previous forms of assessment. I created a sort of Best Practice how-to list in nothing less than a Google Docs.[2] It explains in lay terms how to create one of these for the first time, regardless of experience with Google Docs in the past. Good luck!

Notes

1. "Using Google Docs in the Classroom." 2012. In Scoop.It! edited by Gerald Carey,http://www.scoop.it/t/using-google-docs-in-the-classroom.

2. You can access the "10 Steps to Creating a Google Docs Spreadsheet for Real Time Assessment" at http://tinyurl.com/RealTimeSpreadsheet. Please pay close attention to all of item number 6 when creating one for the first time.