Make time: why workflow matters as much as learning outcomes when teaching digital humanities assignments. Jack Norton, Normandale Community College

Digital humanities offers myriads of benefits, to scholars, to teachers, and to students. As a historian, I believe we can ask different questions about the past with digital humanities tools and those tools, taught to our students, can provision them for diverse jobs in and out of traditional humanities occupations. In addition, digital humanities will succeed as a teaching tool only if instructors pay as much attention to workflow as they do to learning outcomes. Good digital humanities assignments should be realistic in how much time students take to finish assignments and how effective and timely instructors' assessments of those assignments are. In the following reflection, I articulate why I find workflow so important in teaching digital humanities and what I find missing in most conversations about the value of digital humanities for undergraduates.[1]

Like many in the digital humanities world, I taught digital humanities before I knew it had name. I taught my students to podcast, blog, even a bit of GIS tagging. Then I joined twitter, and my awareness of the digital humanities world exploded, for research and teaching. Right now, I teach two world history courses entirely as digital humanities courses. For me, that means all of the assignments produce digital outputs (mostly written analysis), the assignments are created and administered digitally, and students use digital sources (with the exception of some library books) to study the past. I teach in computer classrooms and online and use the same assignments for both. My students produce fourteen different digital humanities assignments, ranging from answering questions based on a historical GIS website, to creating their own digital exhibits on Omeka. I teach 150–180 students a semester.

At about the same time I came to appreciate the importance of digital humanities for my students, I came to head my community college's faculty development group, the Center for Teaching and Learning. Concurrently, I continued work on an ongoing project for how create course-design principles that would level-the playing field for students in poverty. It is at the intersection of digital humanities, what I call an anti-poverty course design, and faculty development that I drew my conclusions about the importance of

workflow when teaching digital humanities lessons.

Most people use "workflow" to describe the steps one takes to complete a task for example, "complete a, then b, then c." Extending that definition, I encourage instructors to consider before and after the "a, then b, then c" and how much time one needs to complete a,b, and c. For example, in an assignment using Omeka Neatline (which allows students to drop points with historical metadata attached onto a GIS map in a content management system) I include eight pages of instruction. This assignment, like all my digital humanities lessons, includes a title, explanation for why we are doing the assignment, learning objectives, steps to complete the assignment, minimum time necessary to complete the assignment, the final product formatting requirements, the grading rubric I will use, and frequently asked questions about this assignment. Of that list, only the steps to complete the assignment relate to the "a, then b, then c" nature of teaching. The remainder of the assignment builds a larger structure onto the assignment, focusing on the "before you get started" (think assembling Ikea furniture) and "thanks for your order" aspects of learning (think after you ordered something online and are wondering when it will be shipped) (Norton, "DH Lesson Plan Template", 2015).

It might be that so many assignment details discourage independent thinking or degrade the importance of the content of the course. Yet, research contradicts these suppositions. First, there is some evidence that more structure in courses "increased course performance for all students, but worked disproportionately-well for black students… and for first generation students."(Eddy, 2015) These conclusions come from a study that gaged student success based on exam grades in biology courses. Biology differs from digital humanities courses in subject matter, but not in the need to master a large quantity of information. What matters in this study is that, faced with exams for which there were right and wrong answers (as distinct from history where the quality of the answers is shaped by the use of evidence), students performed better with more structure. The argument that greater structure hurts a student's ability to master content seems unsupported, especially in the context of first-generation and black students.

Part of the power of digital humanities as a teaching tool relates to the active learning baked into it. Students must do and think at the same time, which helps make

knowledge "stickier" than when students passively receive knowledge through lecture. Cognitive scientists have shown that active learning yields superior results when compared with lecture. A meta-study conducted in 2014 compared 225 studies "that reported on examination scores" of students in science, technology, engineering and math courses using "traditional lecturing versus active learning."(Freeman, 2014) The "results indicate that the average examination scores improved by about six percent in active learning sections, and that students in classes with traditional lecturing were one-and-a-half times more likely to fail than were students in classes with active learning." (Freeman, 2014)

In sum, a good digital humanities assignment should include a robustly structured student workflow. Doing so helps students retain more knowledge and may help close the gap between black and white students and first generation students and non-first-generation students. I speed through the case for a good student workflow first because I believe it matters, but perhaps less than I initially started teaching all digital humanities courses.

Little above covers fresh ground for most undergraduate teachers of digital humanities courses. That this essay emerges in the second volume of *Debates in Digital Humanities* speaks to the emerging breadth of our field. Still, there are areas in digital humanities only recently explored or noted. Teaching digital humanities at community colleges is one of those emerging areas for the larger digital humanities field. Thus far, community colleges have not emerged as major centers of the digital humanities. The 2012 volume of *Debates in the Digital Humanities* lacks a single community college faculty contribution. Which is not to fault the editors: there were perhaps few community college faculty publishing on digital humanities at the time, and, to be fair, the academic world is waking to the importance of digital humanities in community colleges. The Andrew W. Mellon Foundation awarded a $3.1 million grant to work with the Humanities Teaching and Learning Alliance (HASTAC) in pairing graduate students from the Graduate Center, CUNY at LaGuardia Community College.(Davidson, 2014) I am the beneficiary of the new focus on digital humanities at community colleges as a participant in a National Endowment for the Humanities Summer Institute at Lane

Community College during the summer of 2015.

As digital humanities embrace community colleges, we need to recognize the radically different landscape community college faculty face when compared with our four-year colleagues. For example, I teach 150–180 students a semester. That translates into fifteen hours of in-class instruction, and five required office hours. If I spend just five minutes assessing each of my student's work, I add more than thirteen hours of grading. That leaves around six hours for reading, lesson planning, service and any other activity I chose during a forty-hour workweek. Every additional minute I spend on student work adds around three hours of grading. That is the reality of community college faculty across the United States.

I wrestle with these time constraints in a different way as the campus faculty leader of faculty development at my college. Our college celebrates a culture of teaching excellence, and our excellent teachers mind their time carefully. A minor tweak to a learning management system that results in three additional mouse clicks to perform a function might occasion some grumbling amongst our four-year colleagues, yet it can result in massive pushback from community college faculty. Assessment efficiency matters greatly to community college faculty.

Which brings me back to the question of a digital humanities assignment workflow for faculty. Like many, I started with simple, numbered instructions, for example "first do a, then b, then c." Quickly I realized that students needed guidance before starting "a," such as "please use Firefox or Chrome as your browser and make sure the pop-up blocker is disabled." Next, I realized that students succeeded at much higher rates if I used videos or embedded pictures into the instructions. Screen-capture videos were easy to make but time consuming to edit. Instead, I used the installed applications on whatever computer I had in front of me for screen grabs, dropping the images into a word-processing document. Tinkering with formatting issues, images, and arrows pointing to key elements of the images in a word-processing document proved frustratingly time consuming as well. Even after creating these time-sucking, techno-mashups of assignments, I struggled to give timely responses to students as I offered prose feedback and grade justifications.

In short, my early experience with digital humanities assignments resulted in lessons that, at best, offered students clear and well-structured instructions, yet, in creating and assessing those lessons, I gobbled up every spare minute of my life. Students learn best with timely feedback and I could not give them that. It took me eight to ten hours to create each lesson, and twenty hours to grade each lesson. My students produce fourteen different digital humanities assignments in a semester, approximately one a week.

So what changed? First, I abandoned any software that slowed me down. For example, I abandoned a word processor for writing in plain text editor, which allowed me to focus on formatting only when I was ready to publish my lesson plan to the class. I had read other digital humanities scholars who had made the same move to plain text for scholarly publishing or coding reasons, but my choice was entirely andragological. As well, rather than take a screen shot, edit it, drop it into document, and then pray the formatting held in conversion to a web format, I switched to an application that allowed me to do screen grabs from any screen on my computer directly into a plain text document. Second, I focused on reproducibility in my lesson plans. Every assignment began with a lesson plan template I developed, ensuring both good teaching practices and avoiding excessive time spent on framing an assignments structure.

I also focused on those digital humanities tools that allowed me to manage my time efficiently. There are multiple, high-quality GIS websites that allow students to add historical data to maps. I ultimately chose to use GIS plugins in Omeka because I could grade those assignments most efficiently. There is an argument that smells vaguely of superlative, techno-utopia and runs "we should use the best technology available because that will best prepare our students for the workplace." Horse-hockey. I far prefer a student *competent* with a historical GIS program than one *marginally familiar* with the standard-bearer of GIS technology.

Finally, and most importantly, I baked as many of the learning outcomes as I could into the assignment itself so that simply by completing the assignment, students would learn the history I wished and demonstrate the skills I desired they learn. Rather than offering holistic grading comments, I use rubrics that evaluate if students

successfully completed tasks. Rubrics as assessment instruments have issues but using them has allowed me to give meaningful, actionable, and timely feedback to my students.

Minding my own workflow has helped me reduce the time it takes to produce well-structured digital humanities assignments to around two-and-a-half hours and reduced my grading time to around six hours per assignment for all my students. All of my attention to an efficient workflow concomitantly helped me refine what historical sources best helped students understand the past and what tools facilitated that understanding. By learning to create efficient workflows for myself and students, I had to refine my teaching choices, much as a jogger cares little for foot placement as long as one foot lands in front of the other, but a hurdler must pay careful attention to every step.

Refining my digital humanities assignments has also helped me embrace the radically empowering potential of digital humanities as an andragogy. At its best, digital humanities as a teaching practice centers knowledge in a student-centered process wherein students create products from knowledge they mined themselves, with their instructors as content and skill advocates or coaches. Paulo Freire wrote in *Pedagogy of the Oppressed* that the early response of many students was to say "'Excuse us, we ought to keep quiet and let you talk. You are the one who knows, we don't know anything.'"(Freire, 2010, 63) Refining my assignments has helped me talk less at the front of the class, and smile more as I sit next to students working through their assignments. With a rigorous structure, lessons succeed with less explanation from me, leaving me free to address individual concerns. I am not a "guide on the side" because what I know about the past and about the tools we use remains a vital resource for my students. Still, if scholars were to capture every word spoken in my digital humanities courses and apply a distant reading to the corpus that resulted, they would find my students' words, especially students' questions and answers to each other, vastly outnumbering my own. That students have a greater voice, literally, in their education, may be reason enough to pay greater attention to assignment workflow.

Bilbiolgraphy

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[1] My thinking around teaching digital humanities is inspired partly by Audrey Watters and her focus on student rights. See her "Learner Bill of Rights."