

15. Multiliteracies in the Undergraduate Digital Humanities Curriculum: Skills, Principles, and Habits of Mind

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ways DH could increase literacy through engagement

Mark Baurlein complains that undergraduates are passive consumers because they convert “history, philosophy, literature, civics, and fine art into information” as “material to retrieve and pass along.”¹ In contrast, scholarship in digital humanities suggests that inquiry enabled by modes of research, design, preservation, dissemination, and communication that rely on information systems—algorithms or online networks for processing data—deepen and advance knowledge in the humanities. Dubbing teens and twenty-somethings “the dumbest generation” and “mentally agile” but “culturally ignorant,” Bauerlein decrees that “The Web hasn’t made them better writers and readers, sharper interpreters and more discerning critics, more knowledgeable citizens and tasteful consumers.”² Yet, truth be told books haven’t done that either. Like pedagogy intended to teach students to read more critically, project-based learning in digital humanities demonstrates that when students learn how to study digital media, they are learning how to study knowledge production as it is represented in symbolic constructs that circulate within information systems that are themselves a form of knowledge production. A curriculum infused with the pedagogical concerns of digital humanities is a curriculum in which undergraduates learn to think about the cultural work done by and through digital media. Baurlein is right: “The Web” has not taught students anything. But digital humanities can improve students’ abilities to write and read the Web, to interpret, discern, and critique the Web, and ultimately, to be more engaged citizens in the world.

Because the “DH” field³ is burgeoning, opponents and proponents inevitably slide into discussions about definitions of work (the *what*) and therefore knowledge production (the *why*) of digital humanities. At the same time, these conversations have been only loosely tied with broader discussions in the fields of education, information science, and communications that concern the *how* of pedagogy in a digital age, especially as it pertains to undergraduate education. In 2012, digital humanities has multiple established and emerging centers, tenured professors, programs, and initiatives, its own book series and journals, and its own funding office at the National Endowment for the Humanities. *The New York Times* and robust Twitter, Facebook and blogging communities host fervent debates about defining the field and the nature of digital humanities work and considering *who*—computer scientists, new media critics, tenured English and history professors, undergraduates, graduates, alternative career scholars, women, queer, transgender, people of color—takes advantage of these new and limited resources.⁴ In all regards, in discussing how we define the field and who or what we include in it, we must also consider what students should do and should learn in a digital humanities program. This chapter will explore this question (the why, the how, and the what students should learn) by discussing three interconnected topics that influence the development of undergraduate digital humanities curricula: the history of digital humanities as a history tied to curriculum development; the role that institutional infrastructure is playing in program development; and current notions of “digital literacy” in undergraduate education.

Digital Humanities and Undergraduate Curriculum Development: A Brief History

The origins of a name

The turn from calling the field “humanities computing” in the 1980s and 1990s to calling it “digital humanities” in recent years, mirrors a significant turn in the kinds of work that undergraduate students are expected to engage in. This reflection is due to various factors including, but not limited to, changing and emerging technologies. In other respects, however, very little has changed in digital humanities. For instance, the field is and has always been defined by pedagogical concerns. Much like today’s digital humanities educators, twenty-five years ago scholars debated whether computing could serve as a way to deepen inquiry in the humanities. In a 1986 article titled a “Workshop on Teaching Computers and the Humanities Courses” held at Vassar College in July of the same year, Susan Hockey points out that there was much discussion in the workshop concerning “whether programming should be taught;” she found “There was no consensus on this.”⁵ She notes on the one hand that “The main argument for programming was that it gives the right mental approach [...] of stretching the minds of humanists to think about humanists’ problems;” on the other hand, she says, participants “noted that this kind of programming is only amateur programming” or an academic adventure rather than an activity that results in a professional-level product.⁶ More than ten years later at the 2001 symposium “The Humanities Computing Curriculum / The Computing Curriculum in the Arts and Humanities,” Hockey asks similar questions about curriculum development, but in 2001 they are couched (as is indicated by the title of the symposium) in terms of defining the field: “How far,” she asks, “can the need for analytical and critical thinking in the humanities be reconciled with the practical orientation of much work in humanities computing?”⁷ Certainly, Hockey’s concerns are the concerns we have in defining the field now, ten years later: what does learning computing in terms of the humanities entail? What is the pedagogical value of digital humanities?

Value is clearly dependent on venue. Other conversations were happening at approximately the same time in the United States. As the result of a multi-institutional yearlong NEH-funded seminar organized around the question “Is humanities computing an academic discipline?” John Unsworth reported that the University of Virginia would start offering a master’s degree in digital humanities as part of its New Media program. The rationale was to create “trained professionals who understand both the humanities and information technology” and who could “take advantage of the new intellectual and creative possibilities” that digital forms offer. “The program,” he explained, “aims to provide students with experience in recognizing and articulating problems in humanities computing and working collaboratively to solve them, as well as providing hands-on experience in designing and creating digital media.”⁸ Unsworth’s talk, which lays out the curriculum for these students, makes plain the extent to which questions concerning why, what, and how students learn in digital humanities was a central aspect of defining the field. Specifically, Unsworth recalls why the term “digital humanities” was chosen as the title for the degree:

The name of the program (“Digital Humanities”) is a concession to the fact that “Humanities Informatics” (which would probably be a more accurate name) sounds excessively technocratic, at least to American ears. The other obvious alternative—“Humanities Computing”—sounded too much like a computer support function.⁹

Unsworth’s proposal for the master’s in digital humanities at the University of Virginia, delivered at the 2001 Congress of the Social Sciences and Humanities, links the conversation about the name “digital humanities” to a larger conversation about curriculum development.¹⁰

Considering building—or project-based learning in digital humanities

In 2011, the debate about what digital humanities students should learn becomes a nexus around which some scholars are still attempting to define the field—and the point against which others are resisting essentialist definitions. At the 2011 Modern Language Association (MLA) panel “History and Future of Digital Humanities,” for example, Steve Ramsay and Alan Liu (among others) discuss the extent to which the skills students learn in digital humanities project development changes hermeneutics. In terms of whether students should learn programming, Ramsay answers a resounding “yes” so long as we consider that work as part of a larger set of skills that encompass “building.” In a blog post of the same name, he writes:

DH-ers insist—again and again—that this process of creation yields insights that are difficult to acquire otherwise [...] People who mark up texts say it, as do those who build software, hack social networks, create visualizations, and pursue the dozens of other forms of haptic engagement that bring DH-ers to the same table. Building is, for us, a new kind of hermeneutic—one that is quite a bit more radical than taking the traditional methods of humanistic inquiry and applying them to digital objects.¹¹

Liu responds to both Ramsay’s talk and his corresponding blog post by broadening the definition of building further to include multiple roles:

So, I’m okay with the thesis that the differentia specifica of the digital humanities is that its “knowing” includes a robust element of “building”—so long as we recognize the multiplicity of builder roles (including the importance of interpreters, critics, and theorists in the enterprise, many of them the same people as the coders, etc.); and so long as we also recognize that it takes a village or, as Bruno Latour puts it, an actor-network.¹²

In a post by Geoffrey Rockwell from which Ramsay quotes, Rockwell also notes the pedagogical importance of building project teams and project workflows:

We should be able to be clear about the importance of project management and thing knowledge—the tacit knowledge of fabrication and its cultures—even if the very nature of that *poesis* (knowledge of making) itself cannot easily (and shouldn’t have to) be put into words. We should be able to welcome theoretical perspectives without fear of being swallowed in postmodernisms that are exclusive as our craft knowledge.¹³

On a certain level, the point in most of these debates goes back to a point that Father Roberto A. Busa made in 1980—this work that digital humanists do “can help us to be more humanistic than before.”¹⁴ Ramsay, Liu, and Rockwell are doing what humanists always do: they are analyzing and critiquing knowledge production in the humanities. On another level, these debates reflect updated concerns in higher education in general that educators must constantly evolve their curricula to reflect new developments in technology and in the constant changes at higher education institutions.

Examples of building- or project-based learning in undergraduate digital humanities curricula

In light of this continued interest in “meta” conversations about defining digital humanities, discussions concerning specific examples of curriculum development within undergraduate programs remain disparate and few. A search for the word “undergraduate” in the abstracts from the annual Digital Humanities conference (or the joint ACH/ALLC conference) between the years 2004 and 2009 shows that there were only three presentations specifically concerning undergraduate pedagogy.¹⁵ Searching the preceding twenty years of the journal *Literary and Linguistic Computing* produces a more complete picture that reflects a prevailing notion: an undergraduate curriculum in humanities computing or digital humanities is skills-based rather than research-based. In 1991, Thomas N. Corns wrote in an article entitled “Computers in the Humanities: Methods and Applications in the Study of English Literature” that “[t]he computer skills most useful to literature undergraduates are word-processing skills.”¹⁶ Twenty years later, the conversation has in some ways evolved minimally. For instance, in an exchange on

the *Humanist* Listserv in April 2010, Alexander Hay asks, “What would be the bare minimum any would-be Humanities Computing researcher should have in terms of skills? By that, I mean what should you know in order to be eligible for most jobs, funding opportunities, etc.?”¹⁷ Willard McCarty replies that a question concerning skills “is a question implicitly at least asked and answered by those who set up programmes in the field, *especially undergraduate programmes*,” since a question of skills “becomes less important the more academic and the less professional the training becomes.”¹⁸ He continues,

Undergraduate training provides two paths: (1) basic training for those who have bought into the notion that education is for full-time employment, who want the degree in order to get a job; (2) a highly simplified starting point for those who will go on to dwell on the questions that make for a life worth living.¹⁹

McCarty delineates the difference between undergraduate and graduate work as one determined by learning technical skills and professional training on the one hand (undergraduate), and learning to think or do academic research on the other (graduate). Similarly, in describing their work on formal methods in the humanities in *Computing in Humanities Education: A European Perspective* (1999), the authors differentiate between “the two levels of studies common in European universities (undergraduate vs. postgraduate; licence vs. maîtrise; etc.)”: they explain their choice to “pay more attention to the former” as one that reflects the notion that “the presence of humanities computing in the second level is more closely tied to research and raises fewer problems concerning educational methods and organization.”²⁰ In general, over the last decade or so, many scholars in digital humanities have relegated “basic” technical or “computer skills” to undergraduate pedagogy.

Beginning to address *what* and *how* undergraduate students can learn to become “builders” and to engage the “actor-network” that scholars are arguing is essential to digital humanities is a crucial step in determining a role that digital humanities can play in higher education that is beyond basic skills. History shows us that the rigorous attention that scholars are paying to the theory and practice of the digital humanities in recent years is compatible with questions scholars and educators have always asked concerning what students should learn in a humanities program. At the same time, debates on defining the theory and practice of digital humanities have so far failed to adequately define *what* students should learn and *how* students should immerse themselves in these theoretical perspectives. Until we consider digital humanities undergraduate pedagogy in terms other than training, and rather as a pursuit that enables all students to ask valuable and productive questions that make for “a life worth living,” digital humanities will remain unrelated to and ill defined against the goals of higher education.

Why digital humanities

The risks of reading

Before discussing *what* undergraduates learn in digital humanities and *how* they learn it, it is useful to return to Bauerlein’s argument that undergraduates today are “the dumbest” and to consider *why* digital humanities is important in this context. First, Bauerlein is not alone in his thinking. In 2004, the National Endowment for the Arts (NEA) published *Reading at Risk: A Survey of Literary Reading in America* in order to “provide an invaluable snapshot of the role of literature in the lives of Americans.”²¹

The report poses three main premises of concern to this discussion:

1. Literacy is “the baseline for participation in social life [...] and reading of literary work in particular —is essential to a sound and healthy understanding of, and participation in, a democratic society”;
2. Now is “a critical time, when electronic media are becoming the dominant influence in young people’s worlds”; and,
3. Electronic media “have increasingly drawn Americans away from reading.”²²

The crux of the supposed “risk” to literacy lies in the link that the NEA, Bauerlein, and others such as Sven Birkerts make between reading print or static text and critical thinking: NEA chairman Dana Gioia laments that “print culture affords irreplaceable forms of focused attention and contemplation that make complex communications and insights possible,”²³ while Bauerlein reports ominously that “the relationship between screens and books isn’t benign.”²⁴ Like Bauerlein and the authors of the NEA report, Sven Birkerts maintains that book readers learn more because the book is a system that “evolved over centuries in ways that map our collective endeavor to understand and express our world” while “the electronic book, on the other hand, represents—and furthers—a circuitry of instant access.”²⁵ **Seemingly foreboding, these arguments against the digital are built on definitions of literacy that preclude the kinds of multiliteracies that others argue are essential to undergraduate student learning outcomes in the twenty-first century.**

Some dominant defs. of literacy are anti-technological

Multiculturalism, Multimodalities and Multimedia

In contrast to the perspective forwarded by the NEA and others, scholars in education, information studies, literacy studies, and literary studies have been working from data that informs other twenty-first century approaches to literacy, including multiculturalism, multimodalities, and multimedia. For instance, *Reading at Risk* reports that electronic media is a “dominant influence” in young people’s lives that, because of its availability and accessibility, increasingly draws them away from reading and therefore advanced literacy skills.²⁶ In contrast, “A Pedagogy of Multiliteracies: Designing Social Futures” by the New London Group (comprised of ten academics including James Gee and Allan Luke) addresses how literacy pedagogy in a digital age can reflect societal changes such as globalization, technology and increasing cultural and social diversity.²⁷ In particular, the New London Group focuses on access and availability as key factors in “multiliteracies” that empower students to achieve the authors’ goals of literacy learning, including “creating access to the evolving language of work, power, and community, and fostering the critical engagement necessary for them to design their social futures and achieve success through fulfilling employment.”²⁸ The New London group specifically refers to students learning “modes of representation much broader than language alone” such as virtual representations. The authors argue that this broader set of representations shows students that multiliteracies are situational as well as global, that they differ “according to culture and context,” and that multiliteracies can have “specific cognitive, cultural, and social effects” since “in some cultural contexts—in an Aboriginal community or in a multimedia environment, for instance—the visual mode of representation may be much more powerful.”²⁹

Similarly, the “Digital Humanities Manifesto 2.0” launched by the UCLA Mellon Seminars in the Digital Humanities in 2009, reminds us that a notion of “literacy” in the digital humanities is not necessarily a concept pertaining to “universal” literacies: “It is not about the emergence of a new general culture, Renaissance humanism/Humanities, or universal literacy. On the contrary, it promotes collaboration and creation across domains of expertise.”³⁰ A notion of multiliteracies that incorporates and anticipates difference is useful to digital humanities scholars who herald shared expertise and collaborative practices as a primary outcome of teaching students to use online networks and computational methodologies in the humanities.³¹

Participatory cultures

Further, there is clear evidence that students are not dominated by new media (as the NEA reports), but instead feel an increased sense of creative control and therefore a desire to participate in society and actively engage in “generative practices” that herald social change. A 2009 Pew Research Center report titled “The Internet and Civic Engagement” reveals that the kinds of civic activities that bloggers and gamers engage with “in traditional realms of political and nonpolitical participation” are directly related to how they “use blogs and social networking sites as an outlet for civic engagement.” In fact, the Pew report finds that these Internet users “are far more active than other internet users. In addition, they are

even more active than those who do not use the internet at all.”³² Further, it is because of their active engagement that Henry Jenkins defines Bauerlein’s “dumbest generation” in a different fashion, as a “participatory culture” with

[...] relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created).³³

Certainly, the fact that accessibility and availability barriers are lowered in our increasingly globalized and digitized twenty-first century culture means that students think and engage differently in culture and scholarship. The “Digital Humanities Manifesto 2.0” declares that “Digital Humanities = Big Humanities = Generative Humanities” because “Digital Humanities is about integration and generative practices: the building of bigger pictures out of the *tesserae* of expert knowledge.”³⁴ Additionally—given the nature of participatory culture and the desire to encourage a sense of “multiliteracies” in the classroom—teaching digital humanities students to become “builders” and to engage the “actor-network” means more than simply incorporating a different kind of pedagogy that allows for more access to more information or even more creative engagements or remixings. Underlying this work is a fundamental shift in our definitions of literacies, which now must account for multiculturalism and a diversity of perspectives that require multimodal and multimedia knowledge production; it is a shift in which “language and other modes of meaning are dynamic representational resources, constantly being remade by their users as they work to achieve their various cultural purposes.”³⁵

Digital humanities how?

Digital humanities inflected programs

What and *how* digital humanities students learn in order to achieve these multiliteracies is under considerable debate from a variety of perspectives. Simply listing examples of existing programs called “digital humanities” is problematic. In fact, in the fall of 2009, the website at King’s College still touted itself as “one of the very few academic institutions in the world where the digital humanities may be pursued as part of a degree” in undergraduate studies—a fact complicated now that they have cut the program. There are a few programs that currently use the phrase “digital humanities” in either a course title such as the Introduction to Digital Humanities at Bloomsburg University in Pennsylvania and at the University of Victoria or as a specialization or certificate such as that offered by Michigan State University. There is also a brand-new digital humanities bachelor of arts minor at the University of California, Los Angeles,³⁶ and a digital humanities Bachelor of Science degree in professional communication and emerging media at the University of Wisconsin-Stout. This (at times) wide and disparate variety of degree names and types could explain why Willard McCarty and Matthew Kirschenbaum’s list of institutional models for humanities computing—though extensive—does not include an account of specifically undergraduate programs.³⁷

The fact that such a list³⁸ would immediately include a broad range of programs encompassing information science, digital cultures, new media, and computer science reflects the fact that there are a variety of methods by which we are attempting to guide undergraduate study in what McCarty calls the “methodological commons” of digital humanities.³⁹ It also reflects the provocative nature of asking scholars to describe their pedagogical methodologies within an interdisciplinary space. Further, because digital humanities is a field that engages a wide range of disciplinary perspectives, it is a field that is represented by programs of study that are inflected by, but not necessarily called, “digital humanities.”⁴⁰ Certainly, just as Unsworth (and others) asking the question “[w]hat is Humanities

Computing and what is not?” generated more questions than answers about defining the field, asking the community to identify programs inflected by the digital humanities provokes more discussion concerning existing models.

A diversity of methodologies

In an attempt to gather information about the formation of various undergraduate programs, I conducted a survey (advertised on Twitter, the *Humanist* listserv and the 2010 Digital Humanities Conference in London) titled “Designing for Digital Literacy Survey” open to anyone who self-identified with an undergraduate program inflected by the digital humanities. In the survey, I asked some basic questions concerning how an undergraduate program inflected by the digital humanities has been and might be developed within a variety of university settings. These questions were based on similar questions posed by scholars ten years previous,⁴¹ but this previous work had focused primarily on graduate (or post-graduate) work. My intention was to make these same matters surrounding undergraduate pedagogy transparent and to broaden discussion about the range of issues that underpin the formation of an undergraduate curriculum. With my questions, I was interested in two aspects of how digital humanities curricula are developed for undergraduates: (1) how definitions of “digital humanities” manifest in a particular curriculum and (2) how this is the result of infrastructural freedoms and constraints at the home institution. At the time of this writing, eight respondents completed the nine questions. Some of the respondents were from large research universities; others were from small liberal arts colleges. Respondents reflected a range of nationalities, representing universities in Canada, Germany, the United Kingdom, and the United States.

One of the first questions was “What are the aims and objectives of your undergraduate curriculum? What are the main learning outcomes?” Of the eight respondents, a few said their curriculum is focused on teaching digital methodologies as technical skills or “to provide practical technical skills within a humanistic framework.” Specifically, another responded, “[t]he courses teach computer skills and methods as applied to disciplines in the College of Humanities with different sets of courses oriented toward different typical career paths for humanities majors: teaching, editing, publishing, writing, graduate study and research, etc.” Other respondents remarked that the courses were focused on analyzing culture or “provid[ing] students with a critical understanding of the uses and impact of technologies in society.” A third type of respondent focused on interdisciplinarity: “It is an interdisciplinary degree that combines theory and practice in the study of the latest communication technologies.” Another question asked, “How is the academic content of the curriculum structured? What are the core modules/courses and how are they sequenced?” Respondents described programs that include historical and theoretical classes, core or mandatory coursework, as well as “hands-on” classes or labs and capstone projects. Only one mentioned programming while many mentioned “multimedia” classes. Some mentioned a core course that covers a wide variety of topics while others described core courses that can lead students to a wide variety of directions. ~~Whether digital skills, cultural analysis, or interdisciplinary theory and practice, the respondents remained focused on developing active and productive citizens.~~

A diversity of subject areas

It is not surprising that there is such a wide range of existing models: digital humanities is as diverse as the humanities. For instance, Patrik Svensson sees work in the digital humanities as part of a spectrum “from textual analysis of medieval texts and establishment of metadata schemes to the production of alternative computer games and artistic readings of nanotechnology.”⁴² From another perspective, John Unsworth asserts that “the semantic web is our future, and it will require formal representations of the human record” requiring “training in the humanities, but also [...] elements of mathematics, logic, engineering, and computer science.”⁴³ The “competences” that students would achieve in the proposed University of Virginia (UVA) master’s curriculum highlight the significance that all of the participants

placed on programming skills:

Successful completion of this MA program requires students to have, or to acquire, a working familiarity with major computer operating systems (PC, Macintosh, Unix) and software more specialized than the usual office applications (e.g., visual programming software, multimedia authoring tools, databases), as well as with markup languages (e.g., SGML, XML) and programming languages (e.g., Perl, Java).⁴⁴

While Unsworth noted that UVA's MA was proscribed, in part, by institutional resources, the Advanced Computing in the Humanities Working Group on Formal Methods in the Humanities limit their definition of undergraduate programs in humanities computing in Europe based on disciplinary boundaries: they chose “to concentrate on *computing* and to avoid the fields of information, communication, media, and multimedia since these are generally considered as social sciences rather than as humanities.”⁴⁵ From a final perspective, students at Bloomsburg University of Pennsylvania note in their “Manifesto” on digital humanities, “The science major approaches things differently than the literature major—this diversity is foundational to Digital Humanities.”⁴⁶ The small sample of various perspectives in my more recent survey tells plainly what these other examples reflect: different contexts require different pedagogies and digital humanities is a meeting house for these many minds.

A diversity of institutions

Just as simply listing examples of existing programs would leave many digital humanities inflected programs out, simply listing any one program as a model for others would also belie the extent to which scholars and administrators have shaped and are shaping these curricula according to the needs of their specific experiences, disciplines, and communities. Accordingly, with the “Designing for Digital Literacy Survey,” I was interested in discerning the extent to which a particular digital humanities instantiation is the result of the home institution's infrastructure. In a third question I asked, “How does the program fit into the overall structure of the institution? Is it a program in a department or is it interdepartmental? It is certificate or degree granting? If a degree program, what are/were the key issues in establishing a certificate or degree for students in your program?” The respondents come from a wide range of institutional situations. They reported that their programs were in departments such as the Department of Communication Studies and Multimedia, the English Department, and the Computing Department, with a small overlap with the Music Department. Another program was administered directly at the college level (although historically it was part of the Department of Linguistics) and another was described as interdepartmental. Overall, one program granted a bachelor of arts degree, one granted a bachelor of science degree, the others gave BA minors, a “designation,” or certificates. Again, the variety of responses speaks to the culture of a particular institute but it also speaks to the varieties of disciplinary cultures represented in digital humanities, a multiplicity that Geoffrey Rockwell, for one, embraces: “I am no longer confident that we want to take the route of forming a discipline with all its attendant institutions.”⁴⁷

Another question I asked in the survey that pertains to institutional infrastructures was “What technical facilities are needed for the curriculum and how are these supported?” Respondents reported a wide range of facilities. On one end of the spectrum, one respondent said that their program had two computer classrooms, two open labs (“priority is given to our students, and other students throughout the Humanities are let in as space permits”), a collaborative space for group projects, a sound recording studio, video editing stations, and two SMARTboard-equipped rooms. Another respondent had a multimedia wing with two labs of computers and some specialized hardware and software. Others had one or two labs. One had laptops. Some just had technical support. Another responded with measured levity and emoticons saying, “No facilities needed :-)” and then explained: “I flee the computer pools, but force students to bring along and use their laptops in class, in addition we have some laptops to lend for a term; there is WLAN in every room, I provide them with multi-plugs and extension cables.”

Finally, I asked in the “Designing for Digital Literacy” survey “What are other important

infrastructural issues and challenges arose in setting up your curriculum within your institution?” There were three types of responses to this question. First, respondents mention monetary expense. One said, “This is a relatively expensive program to run (both in terms of hardware/software, in terms of faculty who can teach these intensive courses, and in terms of space).” A second response mentioned the general attitude or mindset of colleagues who do not see the relationship between digital humanities and their home disciplines; this respondent cited “[j]ustification to the academic departments in our college” as an issue: “we find it difficult to build awareness of our program because many of the departments don’t see how we can augment their curriculum.” A third respondent mentioned the fact that interdisciplinary work in the academy poses an issue when it was time to grant degrees: “Initially, there were many concerns over the curriculum due to the potential overlap with other degree areas at the university (since many have a digital media component, such as Communication Studies and Fine Art).” In general, these responses point to the inherently interdisciplinary nature of digital humanities. Where does one program start and another program end when we are talking about the digital and the humanities?

The fact is that any program that identifies itself as digital humanities is in fact inflected by a version of digital humanities that is situational and irreproducible. In his talk “A Master’s Degree in Digital Humanities,” Unsworth notes that the faculty, graduate students, and library staff who came together and concluded from their year-long seminar that digital humanities was a discipline drew their experiences from programs that

[...] differed from one another in various interesting ways—some leaned more toward media studies, some more toward linguistics, some more toward informatics. The model that seemed to fit best with the interests and resources already in evidence at Virginia was somewhere between media studies and informatics, as you’ll see in what follows. I should note that UVA has no library science program, no journalism program, no communications program—so the potential for overlap between this new MA and existing graduate programs was effectively nil.⁴⁸

In this talk, Unsworth points out a significant aspect that concerns the *why*, *what* and *how* of the possible UVA master’s degree program that also affects the development of undergraduate programs—that is, the institutional and infrastructural issues that are specific to certain universities. These same issues—faculty experience, academic infrastructures, and available resources—affect how curriculum in undergraduate programs is developed today. At the same time, in order to understand what it means to educate undergraduates in digital humanities, it is crucial that we have examples and models to draw from as the field and the nature of study in general evolves.

What digital humanities: skills, principles and habits of mind

While the survey’s anecdotal responses give us a glimpse into the diverse nature of undergraduate digital humanities programs, it is useful to step back, finally, from the particularities of each program to take a look at more general student learning outcomes and at possible steps forward. To this end and in lieu of listing every possible perspective from the many fields from which digital humanities draws, I am including here a Table of Multiliteracies (Table 1) that includes four perspectives: one from new media studies,⁴⁹ one from humanities and science,⁵⁰ one from gaming and literacy studies,⁵¹ and one from education scholars.⁵² Each of these contributions discusses the kinds of multiliteracies that are engaged within undergraduate humanities curricula through general skills, principles and habits of mind that allow students to progress within and engage society in the twenty-first century.

Further, each list comes from a different disciplinary perspective and is assembled and disseminated differently. In the 2006 white paper *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, Henry Jenkins and his researchers generated a list of the kinds of skills that participatory practices generally engage.⁵³ For her Spring 2011 undergraduate English class *Twenty-first Century Literacies*, HASTAC founder and English professor Cathy Davidson designates twenty “interrelated skills (literacies) that were defined in a specific way for over a century and that beg

redefinition.” Complicating earlier definitions of literacies by posing questions based on the complexities of new forms of literacies, Davidson argues, that “in the Information Age, English departments should be central, helping all of us to understand the complexities of new forms of reading, writing, communicating using this new form of interactive, iterative publication.”⁵⁴ In his book, *What Video Games Have to Teach Us about Learning and Literacy*, literacy scholar James Paul Gee argues that multiliteracies are formed in relation to specific semiotic domains such as videogames. Asserting that bestselling videogames reflect “the theory of human learning built into good videogames,” Gee establishes thirty-six key learning principles that are intrinsic to “good” games.⁵⁵ Finally, the fourth column is a list of “Habits of Mind,” developed by education scholars Arthur L. Costa and Bena Kallick to encourage educators to consider “a composite of many skills, attitudes, cues, past experiences and proclivities” when creating curricula. This list is particularly useful in the context of digital humanities because the habits, which focus on “value,” “inclination,” “sensitivity,” “capability,” and “commitment,” were generated from Costa and Kallick’s interest in exploring the idea that “the critical attribute of intelligent human beings is not only having information, but also knowing how to act on it.”⁵⁶

Davidson	Gee	Jenkins	Costa & Kallick
Attention	Active, Critical Learning Principle	Play	Persisting
Participation	Design Principle	Performance	Thinking and Communicating with Clarity and Precision
Collaboration	Semiotic Principle	Stimulation	Managing Impulsivity
Network awareness	Semiotic Domains Principle	Appropriation	Gathering Data Through all Senses
Global Consciousness	Meta-level thinking about Semiotic Domain Principle	Multitasking	Listening with Understanding and Empathy
Design	“Psychosocial Moratorium” Principle	Distributed Cognition	Creating, Imagining and Innovation
Narrative, Storytelling	Committed Learning Principle	Collective Intelligence	Thinking Flexibly
Procedural (Game) Literacy	Identity Principle	Judgment	Responding with Wonderment and Awe
Critical consumption of information	Self-Knowledge Principle	Transmedia Navigation	Thinking about Thinking (Metacognition)
Digital Divides, Digital Participation	Amplification of Input Principle	Networking	Taking Responsible Risks
Ethics	Achievement Principle	Negotiation	Striving for Accuracy
Assessment	Practice Principle		Finding Humor
Preservation	Ongoing Learning Principle		Questioning and Posing Problems

Davidson	Gee	Costa & Kallick
Sustainability	“Regime of Competence” Principle	Thinking Independently
Learning, Unlearning, and Relearning	Probing Principle	Applying Past Knowledge to New Situations
	Multiple Routes Principle	Remaining Open to Continuous Learning
	Situated Meaning Principle	
	Test Principle	
	Intertextual Principle	
	Multimodal Principle	
	“Material Intelligence” Principle	
	Intuitive Knowledge Principle	
	Subset Principle	
	Incremental Principle	
	Concentrated Sample Principle	
	Bottom-up Basic Skills Principle	
	Explicit Information On-Demand and Just-in-Time Principle	
	Discovery Principle	
	Transfer Principle	
	Cultural Models about the World Principle	
Cultural Models about Learning Principle		
Cultural Models about Semiotic Domains Principle		
Distributed Principle		
Dispersed Principle		
Affinity Group Principle		
Insider Principle		

Table 1. Table of Multiliteracies

What is significant about these lists is not necessarily where they differ, but rather the points at which they converge. They all include skills that require critical thinking, commitment, community, and play. These represent student-learning outcomes that not only gesture towards essential multiliteracies, but also methods for thinking about how we define digital humanities in the undergraduate curriculum. In a recent online article that is responding in part to conversations about defining and disciplining digital humanities, Geoffrey Rockwell considers the complex nature of interdisciplinarity within the previously marginalized world of digital humanities—or what he is calling the “discipline of the refused.” He asks, “[i]s there some way to maintain both the permeability of an interdisciplinary commons where the perspectives of different disciplines are welcome in the commons while encouraging appropriate skills and rigour? Can we have it both ways—have both the commons and well-articulated onramps?”⁵⁷ Posing this query, Rockwell points out the difficult questions that the digital humanities community must face, especially as it continues to grow and expand. In particular, the fact that the three lists on the left (by Davidson, Gee, and Jenkins respectively) in Table 1 fit comfortably within the list of “Habits of Mind” suggests that digital humanities undergraduate curriculum development could be considered less as “a common methodological outlook”⁵⁸ or “methodological commons,”⁵⁹ but more fruitfully and productively as “a disposition toward behaving intelligently when confronted with problems, the answers to which are not immediately known.”⁶⁰ As a result, if we consider digital humanities as a space that requires “multiliteracies,” which are learned through “habits of mind” then we may begin to see how the work of digital humanities allows for a commons to which we could take many roads.

Conclusion

The undergraduate curricula are an integral part of higher education. As such it reaches a community that is essential to the continued work of digital humanities. In 2001, Steven Tötösy de Zepetnek observed that because undergraduates begin their research online, scholars should create more and better online resources for academic study.⁶¹ A glance just at the last ten years of the journal *Literary and Linguistic Computing*, the abstracts from the annual Digital Humanities conference, the first issues of the *Digital Humanities Quarterly*, and the daily news prove that the digital humanities community has worked hard to produce these resources. Scholars in the digital humanities are already teaching the next generation of students not only how to use electronic resources, but how to create them, expand them, and preserve them. Certainly, the digital humanities has its fair share of manifestos that seek, as manifestos do, to revolutionize the way we think about the digital and the humanities:

We wave the banner of “Digital Humanities” for tactical reasons (think of it as “strategic essentialism”), not out of a conviction that the phrase adequately describes the tectonic shifts embraced in this document. But an emerging transdisciplinary domain without a name runs the risk of finding itself defined less by advocates than by critics and opponents.⁶²

The work that digital humanities has done concerning how we define “digital humanities” provides a good example for the work we need to do in defining *why*, *what* and *how* we teach digital humanities. Part and parcel with the work that is engaged in defining and redefining the field should be the work we need to do to consider how the logistics of departments, the crossing paths of curricula development, and the allocation and reallocation of essential resources shapes how we teach undergraduate programs inflected by digital humanities. Now is the time to make that work transparent and to provide a resource for others who wish to continue, broaden, and support this work.

Footnotes

1 Mark Bauerlein, “Online Literacy Is a Lesser Kind,” *The Chronicle Review*, The Chronicle of Higher Education, September 19, 2008, <http://chronicle.com/article/Online-Literacy-Is-a-Lesser/28307>.

2 Mark Bauerlein, *The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future*

- (*Or, Don't Trust Anyone Under 30*) (New York: Jeremy P. Tarcher; Penguin, 2008), 110.
- 3 I use the word “field” purposefully and broadly to denote “An area or sphere of action, operation, or investigation; a (wider or narrower) range of opportunities, or of objects, for labour, study or contemplation; a department or subject of activity or speculation” (*OED*, “field, n.” III.15.a.) This broad term, in my use, includes notions of digital humanities as a discipline and digital humanities as a set of methodologies.
 - 4 These include, but are not limited to, Patricia Cohen, “Digital Keys for Unlocking the Humanities’ Riches,” *The New York Times*, November 16, 2010; Patricia Cohen, “Analyzing Literature by Words and Numbers,” *The New York Times*, December 3, 2010; Matthew G. Kirschenbaum, “The (DH) Stars Come Out in LA,” *Matthew G. Kirschenbaum*, January 13, 2011, <http://mkirschenbaum.wordpress.com/2011/01/13/the-dh-stars-come-out-in-la-2/>; Bethany Nowviskie, “#alt-ac: Alternative Academic Careers for Humanities Scholars,” *Bethany Nowviskie*, January 3, 2010, <http://nowviskie.org/2010/alt-ac/>; Stephen Ramsay, “Who’s In and Who’s Out,” *Stephen Ramsay*, January 8, 2011, <http://lenz.unl.edu/wordpress/?p=325>; Geoffrey Rockwell, “Inclusion in the Digital Humanities,” *philosophi.ca*, June 28, 2010, <http://www.philosophi.ca/pmwiki.php/Main/InclusionInTheDigitalHumanities>; and Alexis Lothian, “THATCamp and Diversity in Digital Humanities,” *Queer Geek Theory*, January 18, 2011, <http://www.queergeektheory.org/2011/01/thaticamp-and-diversity-in-digital-humanities/>.
 - 5 Susan Hockey, “Workshop on Teaching Computers and the Humanities Courses,” *Literary and Linguistic Computing* 1, no. 4 (1986): 228.
 - 6 Hockey, “Workshop on Teaching Computers and the Humanities Courses,” 228.
 - 7 Susan Hockey, “Towards a Curriculum for Humanities Computing: Theoretical Goals and Practical Outcomes” (paper presented at The Humanities Computing Curriculum / The Computing Curriculum in the Arts and Humanities, Malaspina University College, Nanaimo, British Columbia, November 9–10, 2001).
 - 8 John Unsworth, “A Masters Degree in Digital Humanities at the University of Virginia” (paper presented at the 2001 Congress of the Social Sciences and Humanities, Université Laval, Québec, Canada, May 25, 2001), <http://www3.isrl.illinois.edu/~unsworth/laval.html>.
 - 9 Unsworth, “A Masters Degree in Digital Humanities at the University of Virginia.”
 - 10 Matthew G. Kirschenbaum dates the origins of the name “digital humanities” to an April–November time period in 2001 when Unsworth and others were in conversation about their seminal collection, *A Companion to Digital Humanities*. Matthew G. Kirschenbaum, “What is Digital Humanities and What’s It Doing in English Departments?” *ADE Bulletin* 150 (2010): 55–61. The collection was subsequently published as Susan Schreibman, Ray Siemens, and John Unsworth, eds., *A Companion to Digital Humanities* (Malden: Blackwell, 2004).
 - 11 Stephen Ramsay, “On Building,” *Stephen Ramsay*, January 11, 2011, <http://lenz.unl.edu/wordpress/?p=340>.
 - 12 Alan Liu, Response to “On Building,” *Stephen Ramsay*, January 12, 2011, <http://lenz.unl.edu/wordpress/?p=340#comment-9144>.
 - 13 Rockwell, “Inclusion in the Digital Humanities.”
 - 14 Roberto Busa, “The Annals of Humanities Computing: The Index Thomisticus,” *Computers and the Humanities* 14 (1980): 89.
 - 15 These include Martyn Jessop, “In Search of Humanities Computing in Teaching, Learning, and Research” (paper presented at The 17th Joint International Conference of the Association for Computers and the Humanities [ACH] and the Association for Literary and Linguistic Computing [ALLC], Victoria, British Columbia, June 15–18, 2005); Simon Mahony, “An Interdisciplinary Perspective on Building Learning Communities Within the Digital Humanities” (paper presented at Digital Humanities 2008, Oulu, Finland, June 25–29, 2008); and John G. Keating, Aja Teehan, and Thomas Byrne, “Delivering a Humanities Computing Module at Undergraduate Level: A Case Study” (paper presented at Digital Humanities 2009, College Park, Maryland, June 22–25, 2009).
 - 16 Thomas N. Corns, “Computers in the Humanities: Methods and Applications in the Study of English Literature,” *Literary and Linguistic Computing* 6 (1991): 130.
 - 17 Alexander Hay, “What Would Be A Good Basic Skill-set For Humanities Computing Jobs?” *Humanist Discussion Group* 23, no. 758 (2010), April 8, 2010, <http://lists.digitalhumanities.org/pipermail/humanist/2010-April/001181.html>.
 - 18 Willard McCarty, “Basic Skills?” *Humanist Discussion Group* 23, no. 760 (2010), April 10, 2010, <http://lists.digitalhumanities.org/pipermail/humanist/2010-April/001183.html>, my emphasis.
 - 19 McCarty, “Basic Skills?”
 - 20 Tito Orlandi, Joseph Norment Bell, Lou Burnard, Dino Buzzetti, Koenraad de Smedt, Ingo Kropac, Jacques Souillot, and Manfred Thaller, “European Studies on Formal Methods in the Humanities,” in *Computing in Humanities Education: A European Perspective*, ed. Koenraad de Smedt, Hazel Gardiner, Espen Ore, Tito Orlandi, Harold Short, Jacques Souillot, and William Vaughan (Bergen: University of Bergen, 1999), 16.
 - 21 National Endowment for the Arts, *Reading at Risk: A Survey of Literary Reading in America*, Research Division Report

- #46, ed. Tom Bradshaw and Bonnie Nichols (Washington: National Endowment for the Arts, 2004), ix.
- 22 *Reading at Risk*, 1, ix, xii.
- 23 Dana Gioia, Preface to *Reading at Risk*, vii.
- 24 Bauerlein, "Online Literacy Is a Lesser Kind."
- 25 Sven Birkerts, "Resisting the Kindle," *Atlantic Monthly*, March 2, 2009, <http://www.theatlantic.com/magazine/archive/2009/03/resisting-the-kindle/7345/>.
- 26 *Reading at Risk*, ix.
- 27 New London Group, "A Pedagogy of Multiliteracies: Designing Social Futures," *Harvard Educational Review* 66, no. 1 (1996): 60–92.
- 28 New London Group, "A Pedagogy of Multiliteracies," 60.
- 29 New London Group, "A Pedagogy of Multiliteracies," 64.
- 30 Todd Presner and Jeffrey Schnapp et al., "Digital Humanities Manifesto 2.0," University of California, Los Angeles, May 29, 2009, <http://manifesto.humanities.ucla.edu/2009/05/29/the-digital-humanities-manifesto-20/>.
- 31 See Busa, "The Annals of Humanities Computing," 89; Koenraad de Smedt, "Some Reflections on Studies in Humanities Computing," *Literary and Linguistic Computing* 17, no. 1 (2002): 90; and Willard McCarty, "'Knowing True Things by What Their Mockeries Be': Modelling in the Humanities," *TEXT Technology* 12, no. 1 (2003): 43–58.
- 32 Aaron Smith, Kay Lehman Schlozman, Sidney Verba, and Henry Brady, "The Internet and Civic Engagement," Pew Internet and American Life Project, September 1, 2009, <http://www.pewinternet.org/Reports/2009/15--The-Internet-and-Civic-Engagement>.
- 33 Henry Jenkins, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning (Cambridge: MIT Press, 2009), 3.
- 34 Presner and Schnapp et al., "Digital Humanities Manifesto 2.0."
- 35 New London Group, "A Pedagogy of Multiliteracies," 64.
- 36 For a discussion of the programs in digital humanities at UCLA, see Chris Johanson, Elaine Sullivan, Janice Reiff, Diane Favro, Todd Presner, and Willeke Wendrich, "Teaching Digital Humanities through Digital Cultural Mapping," another chapter in this collection.
- 37 Willard McCarty and Matthew G. Kirschenbaum, "Institutional Models for Humanities Computing," *Literary and Linguistic Computing* 18, no. 4 (2003): 465–89. More recently, Lisa Spiro has made 134 digital humanities syllabi freely available at citeline: <http://citeline.mit.edu/fd86695ba2977553d1d40baa97b310a1ae64e10b/>. It is not clear, however, without reading each one and knowing the context whether a class is for undergraduate or graduate students.
- 38 To see how this list might develop, I started an online list of undergraduate programs generated through an informal survey conducted on Twitter, the *HumanistDiscussion* List, and my blog *U+2E19*; see Tanya Clement, "Digital Humanities Inflected Undergraduate Programs," *U+2E19* November 4, 2009, <http://tanyaclement.org/2009/11/04/digital-humanities-inflected-undergraduate-programs-2/>.
- 39 Willard McCarty, *Humanities Computing* (New York: Palgrave, 2005), 131.
- 40 At the time of this writing, Martyn Jessop has written to clarify: "Sadly the ... minor at King's College London has been closed down," though they "still operate 'standalone' modules in digital humanities for 1st and 2nd year students;" see "Undergraduate Programmes," *Humanist Discussion Group* 23, no. 398 (2009), October 27, 2009, <http://lists.digitalhumanities.org/pipermail/humanist/2009-October/000825.html>. For a discussion of previous and current digital humanities training at King's College, see Willard McCarty's chapter, "The PhD in Humanities Computing," and Simon Mahony and Elena Piezzaro's chapter, "Teaching Skills or Teaching Methodology?"
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- 43 John Unsworth, "What is Humanities Computing and What is Not?" *Jahrbuch für Computerphilologie* 4 (2002): 82–83.
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- 46 "Bloomsburg U. Undergraduate 'Manifesto' on Digital Humanities," *4Humanities*, December, 2010, <http://humanistica.ualberta.ca/bloomsburg-u-undergraduate-manifesto-on-digital-humanities/>.
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- 51 James Paul Gee, *What Video Games Have to Teach Us About Learning and Literacy* (New York: Palgrave, 2003).
- 52 Arthur L. Costa and Bena Kallick, “Describing 16 Habits of Mind,” *The Institute for Habits of Mind*, n.d., <http://www.instituteforhabitsofmind.com/resources/pdf/16HOM.pdf>. The article is adapted from a series of books by the authors—*Discovering and Exploring Habits of Mind*; *Activating and Engaging Habits of Mind*; *Assessing and Reporting Growth in Habits of Mind*; and *Integrating and Sustaining Habits of Mind*—published by the Association for Supervision and Curriculum Development as *Habits of Mind: A Developmental Series*.
- 53 Jenkins, *Confronting the Challenges of Participatory Culture*.
- 54 Davidson, “21st Century Literacies.”
- 55 Gee, *What Video Games Have to Teach Us About Learning and Literacy*, 6.
- 56 Costa and Kallick, “Describing 16 Habits of Mind.” For a thorough investigation of Costa and Kallick’s “Habits of Mind” in relation to Learning Theory, including theories on the nature of intelligence, information processing models of learning, metacognitive models, cognitive styles, constructivism, social learning theory, and emotional intelligence, see John Campbell, “Theorising Habits of Mind as a Framework for Learning” (paper presented at the Australian Association for Research in Education Conference, Adelaide, November, 2006), <http://www.aare.edu.au/06pap/cam06102.pdf>.
- 57 Rockwell, “Inclusion in the Digital Humanities.”
- 58 Kirschenbaum “What Is Digital Humanities and What’s It Doing in English Departments?,” 2.
- 59 McCarty, *Humanities Computing*, 131.
- 60 Costa and Kallick, “Describing 16 Habits of Mind.”
- 61 Steven Tötösy de Zepetnek, “The New Knowledge Management and Online Research and Publishing in the Humanities,” *CLCWeb: Comparative Literature and Culture* 3, no. 1 (2001), <http://docs.lib.purdue.edu/clcweb/vol3/iss1/8/>.
- 62 Presner and Schnapp et al., “Digital Humanities Manifesto 2.0.”