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Communities of Practice and Makerspaces: DMAC's Influence on Technological Professional Development and Teaching Multimodal Composing

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Abstract

This article examines how the Digital Media and Composition Institute (DMAC) influences participants' approaches to facilitating technological professional development and to teaching multimodal composing. The authors, alumnae of the 2006 DMAC institute, explain how they identified and adapted effective practices from DMAC "in support of their own educational and professional goals, in light of the specific context at their home institutions and within their varied personal experiences" (DMAC, 2014). The authors trace the influence of DMAC, first, on their approaches to facilitating professional technological development in their department, describing lessons learned about framing, hands-on learning, and community building. Second, the authors discuss DMAC's influence on their approaches to teaching an upper-level Writing in Digital Environments course that emphasizes the digital writing course as a makerspace and community of practice in which enactive learning is encouraged as a method of promoting self-efficacy.

Keywords: Professional development; Digital composition; Multimodal composing; DMAC; Digital literacy; New media; Pedagogy; Communities of practice

After a group of us with a shared institutional home attended the Digital Media and Composition (DMAC) summer institute in 2006, we were able to generalize knowledge gained from the institute and apply it to our teaching and our work facilitating technological professional development in our department. From DMAC, we gained facility with theories, tools, and methods of digital composing; learned to value what we call playful experimentation and "messing around"; and came to understand how communities of practice can help learners become more effective, confident, and reflective practitioners. In addition to describing lessons learned from DMAC, we explain in this article how our knowledge was tested and ultimately transformed as we navigated the individual and contextual factors that complicate transfer. In other words, we show how we translated knowledge gained from DMAC into contextually appropriate practices for technological professional development and digital writing instruction.

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1. Lessons learned from DMAC

DMAC immerses participants in hands-on, creative, and collaborative work with "digital media in support of their own educational and professional goals, in light of the specific context at their home institutions and within their varied personal experiences" (Selfe & Dewitt, 2015, para. 3). When we attended DMAC in 2006, we approached the institute with precisely those dual goals: First, we intended to improve our teaching with digital media, and second, we wanted to develop a process for sharing that learning with our colleagues when we returned to our home institution.

DMAC supports effective pedagogical practices in part because the institute requires participants to become digital composers. In other words, participants don't just read and talk about multimodal composition or receive training on software; they are immersed in that work. A key tenet of the National Writing Project is that "[w]riting is the best way for us to establish our own expertise, to be able to figure out our own answers to the difficult issues of teaching writing" (Gillespie, 1985, para. 13). This same principle applies to multimodal composition: *Doing* multimodal composing is the best way for teachers of writing to establish expertise. As Debra Journet (2007), writing about her own DMAC experience, emphasized, "I learn not just by theorizing or reflecting or understanding the rules; it is also essential that I practice and participate actively in any new semiotic domain" (p. 114). Although a two-week institute can't make participants experts, it can break down certain barriers that impact teachers' "willingness to experiment" and "to take personal and intellectual risks," and "to engage in composing [multimodal] texts" (Selfe, 2004, p. 57).

During the institute, we experienced hands-on learning as we collected and assembled artifacts (e.g., scanned photographs, digital images, audio clips) and used sound (e.g., voice, music) and visuals to tell stories. We learned the technical aspects of capturing and editing video and audio. There was also plenty of time for playful experimentation and what Journet (2007) called "exploratory inventiveness" (p. 119). *Living and Learning with New Media*, a 2008 report summarizing findings from the MacArthur Foundation-funded Digital Youth Project, described the way "young people acquire various forms of technical and media literacy" (Mizuko et al., 2008, p. 2). In particular, the report suggested that digital literacy is acquired through "tinkering, and 'messing around' with new forms of media.. .. Through trial and error, youth add new media skills to their repertoire" (p. 2). Although our fellow DMAC participants and we were not "digital youth," our acquisition of new digital literacies certainly included tinkering, messing around, and trial and error. As the MacArthur report explained,

> The most important factors are the availability of technical resources and a context that allows for a degree of freedom and autonomy for self-directed learning and exploration. In contrast to learning that is oriented toward a set, predefined goal, messing around is largely self-directed, and the outcomes of the activity emerge through exploration. (Mizuko et al., 2008, p. 22)

We did participate in goal-oriented activities at DMAC, but the institute also allowed for "self-directed learning and exploration" (Mizuko et al., 2008, p. 22). As learners, we appreciated being able to "mess around" and experiment as we tested tools and strategies; in the end, this playful experimentation promoted a deeper understanding of digital composing and a greater sense of self-efficacy (Mizuko et al., 2008, p. 2).

At DMAC, hands-on work and free time for playful experimentation were supplemented by the resources, readings, instruction, and troubleshooting assistance provided by speakers, institute coordinators, and participants. For example, while at DMAC, Laura observed Cindy Selfe interacting with a participant who was struggling with some technical aspect of her digital story. Cindy didn't know the answer, so she invited the participant to figure it out with her. Soon a few other people gathered around offering suggestions and ideas. Eventually, the problem was solved. In that moment, Laura observed a participant who was willing to ask for help, a facilitator who wasn't afraid to admit to not knowing the answer, and a group of peers willing to offer expertise and ideas. In our experience, DMAC offered a model of goal-oriented activity and playful experimentation complemented by ongoing reflection and the support of co-learners and mentors, a model similar to what Barb Blakely Duffelmeyer (2003) described as a community of practice.

In "Learning about learning," Duffelmeyer (2003) drew on Etienne Wenger's conceptualization of communities of practices: "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger, McDermott, & Snyder, 2002). Connecting Wenger's model to her own qualitative study of TAs' experiences teaching first-year composition in computer-supported classrooms, Duffelmeyer offered, "an alternative way to think about how we may gain facility and comfort with technology: through an on-going process of participatory activity, a purposeful and active route of exploring and figuring things out as circumstances deman[d]" (2003, p. 303).

Through the dialogue, practice, and resource and information sharing the institute encouraged, DMAC provided us, as participants and learners, with the benefits of membership in a community of practice, albeit a short-term version. Experiencing this approach to technological professional development made a lasting impression on us that continues to influence our work with colleagues and students.

In the following pages, we explain how the communities of practice model can be adapted for use in professional development contexts as well as in the classroom. We trace the influence of DMAC, first, on our approaches to facilitating professional technological development in our department and, second, on our approaches to teaching an upper-level Writing in Digital Environments course.

2. DMAC's influence on approaches to technological professional development

To us, DMAC represented an opportunity to learn from some of our field's leading scholars as well as likeminded colleagues from across the country while observing a highly successful approach to technological professional development. The institute was particularly appealing to us because our teaching, research, and service often intersect with digital rhetoric and writing; we share an interest in faculty professional development; and we are interested in supporting pedagogically effective use of technology within our department.

We knew that there was a need in the English department for pedagogy-focused (rather than tool-focused) technological professional development. Our observations were supported by a study published the same year we attended DMAC. "Integrating Multimodality into Composition Curricula" described the results of Conference on College Composition and Communication (CCCC) funded research on multimodal composing and "how teachers were preparing themselves to design and assess [multimodal composition] assignments" (Anderson et al., 2006, p. 60). The results of Daniel Anderson et al.'s (2006) survey perfectly described what we knew to be true of our departmental peers' experiences as well as our own. Those of us who incorporated multimodal composing into our courses were "primarily self-taught" (2006, p. 73). When we did attend workshops, they were mainly "tool-oriented" (p. 74). The researchers also found that only approximately 29 percent of respondents received technological professional development through departmental workshops, and:

> [t]eachers who assigned multimodal compositions. . . reported needing increasingly effective and appropriate professional development opportunities. Professional development workshops offered by institutions and departments.. . provided hands-on practice with specific software tools, but little help in conceptualizing multimodal assignments [or] assessing student responses. (Anderson et al., 2006, p. 78)

We saw value in the idea of department- and discipline-based technological professional development, and we turned to DMAC to gain deeper knowledge of "digital literacy practices" and how those practices might be represented in "meaningful assignments [and] syllabi" (Selfe & Dewitt, 2015, para. 1). Our goal was to share that knowledge with our colleagues after completing the institute, so we also planned to pay close attention to not only the content but also the ways in which institute directors Cindy Selfe and Scott DeWitt, along with their staff, facilitated our work.

As we had hoped, DMAC provided strategies for conceptualizing and assessing multimodal assignments as well as hands-on practice creating multimodal texts. Further, when we reflected on *how* we had learned at the institute, we were able to identify framing, enactive-learning, and community-building strategies Selfe and DeWitt employed effectively prior to and during the institute.

2.1. Framing

Literature on motivation in training and development tells us that framing provides participants with "cues from which [they] construct schemas about the content, target, and potential value of training experiences—cues that in turn frame the training situation" and help participants "develop expectations about the training experience" (Beier & Kanfer, 2011, p. 72). Although it seems like common sense to communicate the purpose and objectives associated with technological professional development, too often this information is communicated in either a *learn to use X* or *learn to use X to do Y* formulation; for example, *learn to use* VoiceThread or *learn to use* VoiceThread *for class discussions*. This tool-oriented framing does not provide cues about the kind of intellectual work necessary to develop what J. Elizabeth Clark (2010) has called "an intentional pedagogy of digital rhetoric" (p. 28).

DMAC offers a helpful example of how technological professional development can be framed as intellectual work. The DMAC website stated that participants would "discuss the complex issues of access, equity, agency, and literacy using the perspectives of both theory and practice to unpack these important concepts" (Selfe & Dewitt, 2015, para. 2). Although the information provided to us in 2006 may have differed slightly from what is on the current institute site, we remember very clearly going into the experience expecting, thanks to the directors' thoughtful framing, not only to gain greater facility with the tools of digital composing but also to grapple with the theories and issues that inform and complicate pedagogies and practices. Although, as we mention in the teaching section of this article, we would have in 2006 appreciated even more attention to transforming theories into practices, our expectations were fulfilled overall. Framing technological professional development as intellectual work happened before and during the institute: Each day directors and guest speakers/instructors further framed our agenda in terms of conceptualizing and contextualizing the work of digital composing.

This action-oriented approach shaped an active-learning experience—*explore, apply, design, create, experiment, discuss*—with institute staff who offered *assistance, support, instruction, and encouragement*. The directors and their staff also used framing effectively during the institute by providing clear information about the purpose of as well as interconnections among institute tasks and topics. Throughout our DMAC experience, we found this emphasis on the significance and usefulness of what we were doing motivating—in part because these approaches always started with intellectual considerations and scholarly inquiry rather than tool-specific tasks.

2.2. Hands-on learning

In addition to framing DMAC effectively, Selfe and Dewitt designed the institute to immerse participants in hands-on learning. The directors included time for instructor-directed work as well as self-directed work, goal-oriented tasks as well as playful experimentation, theoretical discussions as well as practice employing those theories. The importance of doing, exploring, and "messing around" cannot be overemphasized when it comes to learning multimodal composing and gaining a sense of self-efficacy. DMAC's balance of structure and freedom was helpful and appropriate for an audience that included participants with a range of abilities and intentions.

2.3. Community building

The final lesson we took from DMAC as a model of effective technological professional development was how a community of practice approach could support inquiry and learning among professionals. DMAC emphasized dialogue and encouraged peer learning, collaborative problem solving, and information and strategy sharing. Our experience paralleled what Wenger, Richard McDermott, and William Snyder (2002) described in their work on communities of practice:

> As [community of practice members] spend time together, they typically share information, insight, and advice. They help each other solve problems. They discuss their situations, their aspirations, and their needs. They ponder common issues, explore ideas, and act as sounding boards. They may create tools, standards, generic designs, manuals, and other documents—or they may simply develop a tacit understanding that they share. However they accumulate knowledge, they become informally bound by the value that they find in learning together.

Although some workshops, such as those that precede professional conferences, may include opportunities for peer learning, they cannot build community like DMAC. DMAC's two-week timeframe creates space for such a community of practice to develop, but Selfe and Dewitt also planned the institute in a way that encouraged community building, particularly during discussions, studio time, and social activities.

2.4. Applying lessons learned: Technology and pedagogy workshops

DMAC modeled effective practices related to framing, hands-on learning, and community building, and we have applied these strategies when offering technological professional development in our department. Within a year of attending DMAC in the summer of 2006, we facilitated a three-day "Technology and Pedagogy in English Studies" workshop for faculty (McGrath & Guglielmo, 2014). Keeping our busy audience in mind, we were careful to communicate the subject, purpose, and potential value of the workshop, which we framed as an opportunity to create "a

classroom-ready assignment [designed to engage] students in the analysis and creation of multimodal texts" (McGrath & Guglielmo, 2014, para. 19) and an associated assessment strategy to be used in an upcoming course. Although at this point we might frame the workshop differently and provide additional cues, we did make an effort at the time to communicate that the workshop would emphasize the intellectual work of investigating intersections of "technology, pedagogy, multimodality, rhetoric, and the teaching of writing in the twenty-first century classroom" (McGrath & Guglielmo, 2014, para. 19); in other words, we stayed away from the tool-oriented *learn to use X to do Y* formulation. Through the pre-workshop readings and on the first day, we made additional efforts to frame the agenda in terms of conceptualizing and contextualizing multimodal composing.

In addition to applying the framing strategy we had observed at DMAC, we made hands-on learning—*doing* and not just talking about digital composing—an important part of the workshop. Participants used new as well as familiar tools to create multimodal texts before they planned assignments and assessment strategies. This hands-on learning—which included direct instruction as well as time for playful experimentation—was particularly important to our participants because lack of experience represented a significant barrier to integrating multimodal composing into their courses. Our own hands-on learning at DMAC helped us gain self-efficacy and the confidence to teach multimodal composing; we wanted the same for our workshop participants.

Although we could not do in three days what DMAC was able to do in two weeks, we still emphasized collaborative problem solving, peer learning, and information and strategy sharing during the workshop sessions and in the workshop space on the learning management system. Importantly, we viewed the workshop as one part of a broader effort to establish a community of practice within our department. Other colleagues who had attended DMAC with us transformed their knowledge, resulting in an in-house technology-focused conference (Daniell, Davis, Stewart, & Taber, 2008) and the edited collection *Teachers as Avatars: English Studies in the Digital Age* (Davis & Stewart, 2011), both of which involved not only our fellow DMAC participants but also a variety of other departmental colleagues. DMAC was the catalyst for the community building that happened in our department. Our community of practice began to take shape in the workshop, gained members through the conference and the collection, and ultimately became a reality thanks to the *Tech Tips and Bits* workshop series, which sustains our community of practice to this day.

Letizia recognized that many teaching in our department were engaged in creative and innovative work with technology and multimodal composing in their courses, and she was eager to find ways for them to showcase this work. During the fall 2010 semester, Letizia developed *Tech Tips and Bits: An English Department Technology Lecture and Workshop Series* with this call for proposals:

> The 2010–11 Tech Tips and Bits series will include presentations and workshops by English Department faculty on using technology in the classroom and in professional and scholarly work. These workshops will offer a combination of demonstration and hands-on training for participants as well as examples of pedagogically effective assignments and activities for participants to implement in their own courses. Both an opportunity for developing multiliteracies in the classroom and for engaging in scholarly activity, these workshops will highlight and contribute to the ongoing and excellent work in digital humanities taking place in our department.

The *Tech Tips and Bits* workshop sessions are typically 60–75 minutes in length, with 15–20 minute presentations and additional time for discussion and hands-on work by participants. Building in this time for hands-on work reflects our ongoing effort to apply the DMAC principle of learning by doing as a way to develop faculty expertise and confidence.

These workshops allow faculty to remain up-to-date on technology, and they provide discipline-aware, hands-on training and time for playful experimentation. A departure from the standard technology workshop offered by technology support or training services on campus, these pedagogically focused workshops provide participants with classroom-tested applications from their department colleagues and foster collaborative expertise. Furthermore, the workshops encourage faculty of various ranks and specializations within the department (including part-time contingent faculty) to participate in our community of practice and to showcase their work as confident, reflective practitioners. Many of the presentations have led to regional and national conference presentations, drawing attention to the significance of this professional work. Letizia was able to use knowledge gained from DMAC—the importance of both theorizing and doing the work of multimodal composing, of offering structure as well as freedom, and of peer instruction and collaboration—while establishing a professional development practice that was sensitive to our colleagues' need to professionalize their work with technology.

DMAC is not something we sought to—or had the resources to—replicate when planning workshops in our department. Instead we applied strategies observed at DMAC to actualize what DMAC promises to participants: the recognition of different professional goals in the context of institutional homes. As a result, a digital writing and rhetoric community of practice emerged that sustains technological professional development in our department while encouraging community members to "develop more confidence in incorporating computer technology into their pedagogy, retain a sense of agency and choice about it, and be able to make reflective and responsible decisions about its use" (Duffelmeyer, 2003, pp. 297–298).

3. DMAC's influence on teaching

Along with shaping our approaches to technological professional development, DMAC also shaped our teaching practices. After our group returned from DMAC in 2006, Laura compiled a trip report that summarized our experiences at the institute. One of our colleagues wrote:

> The most important thing DMAC did for me was give me the time, equipment, and support I needed to learn new software and then use the software to create a project that I will be able to use as a model for my students' future projects. (McGrath, 2006)

Most of us did, in fact, share the artifacts we created—our digital literacy narratives—with the students in our classes. Those artifacts allowed us to talk about digital composing processes, tools, challenges, and lessons learned in ways we could not without doing digital composing ourselves. The artifacts allowed us to reflect as learners and to show students how we were and are engaged in learning. In the same report, Laura reflected on how her DMAC experience inspired her as a teacher:

> At DMAC, I had the opportunity to be a student again. The experience was intense and sometimes frustrating, but, in the end, it was rewarding and instructive. The hands-on work that I did at the institute—collecting images and audio, learning unfamiliar software programs, experimenting with new approaches to presenting a narrative—gave me ideas for facilitating students' acquisition of rhetorical skills and for creating rich digital course content. I can see possibilities for all of my courses.. . but I am particularly excited about the ways in which I can use what I learned to restructure my undergraduate computers and writing course. (McGrath, 2006)

As this quotation suggests, we were eager to connect DMAC concepts to existing course objectives (e.g., develop rhetorical knowledge), to use our skills to develop multimodal instructional material, and to reimagine existing courses in light of what we had learned about teaching, doing, and assessing multimodal composing.

Letizia's comments in the report reflect overall satisfaction with DMAC but point out that it would have been helpful for DMAC to provide even more deliberate opportunities to think about pedagogy and how participants could realistically take what they had learned and apply it. Instead of simply transferring the DMAC information and strategies into our classes, we had to transform the knowledge we had gained—still largely theoretical, though made much more concrete by active learning—into teaching practices, assignments, and assessments that made sense in context.

Although we teach digital writing and rhetoric in a wide variety of courses, Writing in Digital Environments (WRIT 3150) is a course that usefully demonstrates our approaches to multimodal composing, approaches that reflect transfer as well as transformation of DMAC knowledge. Writing in Digital Environments is an upper-division course that is part of the English department's Professional Writing minor and enrolls students from a number of disciplines, including Communication. We both teach the course regularly and in a variety of formats (face-to-face, online, and hybrid) with the goal of engaging students in the theories and practices of multimodal composing that will serve them in contexts beyond the classroom. As a space for hands-on learning, playful experimentation, and collaboration, this course has become for us the ideal site for transferring our DMAC knowledge—strategies, practices, content—and for fostering for undergraduate students the kind of community of practice we found so helpful at DMAC.

3.1. Enactive learning and self-efficacy

For both of us, one of DMAC's lasting influences on our work with technology has been the confidence the institute gave us to approach new technology platforms; we were reminded that we always bring basic digital literacy to the

experience no matter how unfamiliar the platform and that we can figure out the rest by knowing where and how to find the resources we need for troubleshooting. No new tool or space is *entirely* new; each tool or space brings with it traces of the past; we can deliberately draw on what we have experienced to situate ourselves toward new tools and spaces. In this way and in the ways in which we engage this work collaboratively, we are *seekers* (Canada, 2000), contributing to and benefitting from various communities of practice connected to our work with technology. Furthermore, DMAC helped us understand the digital writing process "inside out" through enactive learning, an active, hands-on, trial-and-error process (Winne & Hadwin, 2011, p. 37). What and *how* we learned at DMAC encouraged us to build into WRIT 3150 more opportunities for both self-directed work and social learning throughout the composing process.

Much of our enactive learning during DMAC took place in the computer lab where we worked with audio and video editing software. Some of it took place in the field, as we walked the grounds of the Ohio State University campus taking photographs and recording video. Although we spent some time following the instructions and guidance provided by institute facilitators, there was plenty of time for playful experimentation, and over the course of the two weeks, we were reminded what it felt like to be students, out of our comfort zones, pushing ourselves to learn the software well enough to realize our visions for our projects. By consulting various message boards and online resources and through plenty of "messing around" and "exploratory inventiveness," we each produced projects that, if not perfect, at least communicated our intended messages in interesting ways and gave us a sense of accomplishment. This experience led us to emphasize in our teaching enactive learning as a path toward greater self-efficacy.

3.2. Makerspaces and communities of practice

We experienced DMAC as a makerspace, "a destination for thinking, learning, doing, creating, producing, and sharing" that supported "formal and informal learning" through "designing, playing, tinkering, collaborating, inquiring, mentoring, experimenting, problem solving, and inventing" (Loertscher, Preddy, & Derry, 2013, p. 48) and, as mentioned previously, a community of practice. Before DMAC, we had learned to use software by self-instruction or by attending workshops that led us through a series of steps to a predetermined (by the facilitator) goal or end-product. The latter is a practical and time-efficient method of introducing learners to something new, but DMAC offered an alternative way of learning to create with technology that we wanted to adapt for our writing classrooms. In particular, we sought to make the WRIT 3150 classroom a "makerspace" and to provide students with the opportunity to form and sustain a community of practice over the course of the semester within which they could test ideas, develop practices, share resources and strategies, and develop new knowledge.

3.3. Applying lessons learned: Collaborative digital composing and digital storytelling

In the following section, we describe two versions of WRIT 3150 that illustrate the ways in which our DMAC experiences continued to shape our teaching practices and course designs. As DMAC participants, we worked to adapt our knowledge of multimodal composing from a professional development context into our teaching. We immediately incorporated content and procedural knowledge from DMAC into WRIT 3150, but over time we also found ways to transform the course into a makerspace and community of practice in which active, collaborative learning and playful experimentation were encouraged.

Modeled in part on the two-week institute in which we participated, our most recent versions of WRIT 3150 were hybrid sections that blended face-to-face class meetings with online work, and collaborative problem-solving and discussion with individual composing and enactive learning. Drawing from writing studies scholarship that typically defines knowledge transfer as "applying knowledge or skills learned in one context to an alternate context" (Moore, 2012), we provided framing through course readings and discussions, ever-conscious of helping students to apply what they learn "in subsequent writing for academic and professional purposes" (Ortiz, 2013, p. 234; see also Anson & Forsberg, 1990; Bergmann & Zepernick, 2007; Wardle, 2007; Moore, 2012). Envisioning the course as a "makerspace" that moves students from consumers to creators of digital content (Loertscher et al., 2013, p. 48), we encouraged hands-on practice through online and face-to-face workshops. And finally, in facilitating collaborative learning, we created opportunities for students to "share a concern, a set of problems, or a passion about a topic, and [to] deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002).

In a recent version of Letizia's course, for example, students collaborated on a website that offered profiles of notable sites and historic events in the city of Atlanta, Georgia, through blog posts, audio essays, and digital videos. Extending the model of DMAC, the course design included both in-class and online activities with framing that invited students to engage with current conversations within the field and to consider how they might translate these digital composing practices outside of the writing classroom. Letizia invited students to "learn not just by theorizing or reflecting or understanding the rules," as Journet (2007) argued, but also to "practice and participate actively" (p. 114). To that end, students created a collaborative digital project from the bottom-up, making collective decisions about design, layout, and content. Working with local topics, they engaged in primary research, composed for a real audience, and made careful and deliberate rhetorical choices informed by feedback from their community of peers. As we had at DMAC, students gained hands-on experience with collecting and assembling artifacts and using sound and visuals to tell stories.

The individual projects (blog posts, audio essays, digital videos) required the student researchers and composers who contributed to the site to create rhetorically-aware digital texts while "tinkering" with technologies that were new to nearly all of them (Loertscher et al., 2013, p. 49). Drawing from her work at DMAC, Letizia also introduced software that was free and easy for students to use even with little to no prior experience, including Audacity, WordPress, and SoundCloud. In addition to brief demos provided in class or online during the course, the most significant support throughout the project, both in terms of composing texts and troubleshooting technology, came in the form of collective knowledge- and resource-sharing in peer response sessions for the individual projects, through online discussions within the course management system, during in-class workshops, and as part of individual conversations during which students shared what they had discovered. Guided by the DMAC model of a community of practice, the course design allowed students to compose collaboratively, to explore the affordances of digital and social media, to participate in enactive learning, and to contribute to the "global knowledge society" of the real world (McClure, 2011).

For Laura, a digital storytelling project assigned in a recent section of WRIT 3150 most effectively illustrates the way she envisions her digital writing course as a makerspace and a community of practice. Over a five-week period, students created environment-themed content for local elementary, middle, or high school student audiences who then responded to the stories in a variety of ways (artwork, podcasts, letters, movie review-style critiques, etc.). The WRIT 3150 students had freedom over the form their stories would take and the technologies they would use to produce the content, yet as a community of practice formed around multimodal composing and digital rhetoric and brought students into conversation with one another during and outside of class, almost all of the students chose to create narrated videos that included a variety of artifacts (still images, video clips). As a platform for knowledge and resource sharing, the course wiki included a "toy chest" inspired by Alan Liu's (n.d) collection of, "online or downloadable software tools and thinking toys that humanities students and others without programming skills (but with basic computer and Internet literacy) can use to create interesting projects" (para. 1), and students were invited to add links to the list. Most of their technical learning was enactive and self-directed—though supported by the teacher, peers, and instructional materials—and happened outside of class. Early and frequent experimentation with various tools was encouraged and modeled.

Students worked in seven-person writing groups based on the grade level of their target audiences. Friday class meetings were used for brainstorming about topics and audience needs and expectations as well as for informal and formal peer response. Although it wasn't required, group members also messaged one another outside of class for support. Like we experienced at DMAC, a makerspace can be intentionally designed, but a community of practice emerges as people come together around topics of shared interest and participate in processes of discussing, helping, and sharing that support learning. As students shared, analyzed, and discussed multimodal texts; offered feedback on proposals, scripts, and storyboards; talked through the rhetorical implications of technology- and design-related choices; and reflected on how what they were learning would inform future digital compositions, the emerging community was strengthened in ways that sustained it beyond the five-week activity sequence. The community proved to be a source of connection and support throughout the semester. Together with the self-efficacy gained from successful self-directed learning, this community allowed students to complete challenging assignments and work with unfamiliar technologies more confidently.

Within the physical and virtual makerspace, together with the peers with whom they had formed a community of practice, and through a teacher-facilitated process that encouraged peer and independent learning, students gained facility with analyzing, designing, critiquing, and producing multimodal digital texts. As intended, this very much mirrored our learning experience at DMAC, where we gained procedural knowledge and developed confidence through formal and informal instruction and feedback, from observing various coping and mastery strategies modeled by

instructors and peers and by working hands-on and through trial-and-error with the tools and processes of digital composition.

The writing classroom, like the DMAC institute, can be "a destination for thinking, learning, doing, creating, producing, and sharing" (Loertscher et al., 2013, p. 49) where multimodal composers gain technical, procedural, and rhetorical knowledge through formal and informal instruction and independent and collaborative learning. Additionally, reflecting on these examples of DMAC-inspired course designs, we return to the Gillespie (1985) quote about the most effective writing teachers being writers themselves, and we recognize that we would not be able to support our students' work in authentic ways had we not gone through DMAC and experienced the process as students ourselves.

4. Conclusion

Although we attended DMAC over eight years ago, our participation in the two-week institute continues to shape our teaching and professional work. Importantly, DMAC provided us with a model of technological professional development that promoted careful framing and community building and allowed us to envision "messing around" and reflective practice as essential parts of the learning process. Our experiences demonstrate that effective practices observed at the institute can be integrated into "regular, program-specific professional development opportunities that emphasize that faculty professional development in teaching digital writing and digital writing scholarship is the work of rhetoric and composition faculty" (Graupner, Nickoson-Massey, & Blair, 2009, pp. 21–22). As teacher-scholars, we see the value of department-led technological professional development that creates opportunities to build and share expertise, establishes a broader base of knowledge and learning within a department or program, and institutes sustainable professional development practices that draw on this broader base and help to professionalize work with technology.

Within communities of practice that develop around digital writing and rhetoric, it is essential for participants to *learn why* and to *learn how* in ways that are meaningful and transferable. This is true in professional development contexts as well as in writing classrooms. Multimodal composing requires attention to both theory and practice, and effective instruction will offer a balance of structure and freedom. We came away from DMAC with knowledge and confidence, and we seek to create similar experiences for colleagues and students.

As we continue to reflect on our DMAC experience and how these models of teaching and professional development might shape the work of other teacher-scholars, we recognize that communities can support members, but they can also exclude or marginalize certain ideas and individuals. Although we believe in the importance of facilitating the emergence of communities of practice in departments and classrooms, we are also curious about these potential exclusions and tensions that may surface within, at the margins of, and outside of communities of practice. As Wenger et al. (2002) acknowledged, within a community of practice:

> a lot of implicit assumptions can go unquestioned, and there may be few opportunities or little willingness inside the community to challenge them. The intimacy communities develop can create a barrier to newcomers, a blinder to new ideas, or a reluctance to critique each other.

These unquestioned assumptions and barriers deserve further consideration.

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