

**Developing Multimodal Literacy: The Role of Collaboration and Constraints in the Design
of New Media Assignments**

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Introduction

As composing text becomes increasingly intertwined with an array of new modes, media, and technologies, communicators are presented with ever-expanding opportunities for informing audiences. Writers must negotiate complex decisions not only about the content and structure of their intended messages but also about the rhetorical and communicative affordances provided by different media and technologies. This article examines how students in a seminar on multimedia theory and production navigated these composing challenges as they created audio documentaries utilizing multiple media. Specifically, I discuss this assignment and resulting student projects in terms of the critical framing and scaffolding needed to prepare students for this work, as well as the ways in which assignment constraints can encourage critical deliberation over authorial intention, audience, media, and other rhetorical considerations essential to the composition of substantive new media texts. In addition to demonstrating the communicative and educational possibilities of multimodal literacies, discussion of this course project illustrates the role of collaboration in the production of multimedia and the potential value this holds for students both academically and professionally. Although this article uses the experience of graduate students as the focus of the assignment sequence, this discussion is applicable to the ways in which the multiple literacies of students at all levels can be developed.

Background and Key Concepts

Literacy is Changing: Multiliteracies and Multimodality

It has become almost commonplace to hear calls for the inclusion of multiple media into coursework in composition, rhetoric, and professional communication (Kress & Van Leeuwen, 2001; New London Group, 2001; Selber, 2004; Wysocki, Johnson-Eilola, Selfe & Sirc, 2004; Yancey, 2004). Much recent scholarship in writing and professional communication studies has focused on the ways changing technologies are influencing the kinds of texts available for consumption and the kinds of practices needed to analyze and produce them. In her Chair's presentation to the 2004 Conference on College Composition and Communication, Kathleen Yancey contended that "Literacy today is in the midst of a tectonic change" and writing is no longer just about "words on paper" (2004, p. 298). In addressing her audience of 1,500 college writing educators and scholars, Yancey challenged listeners to broaden their views of what constitutes writing and to explore how they might better attend to its increasingly multimodal dimensions. She argued that while traditional word-based writing is not likely to disappear anytime soon, students already "compose words and images and create audio files on Web logs (blogs), in word processors, with video editors and Web editors and in e-mail and on presentation software and in instant messaging and on listservs" (p. 298).

Not only can we take advantage of students' interest and everyday practice in utilizing these various means, but we also must recognize that this wider range of communication media is increasingly the norm and expectation for students, faculty, and employers. As Selfe (2004) argues, "if we continue to define literacy in ways that ignore or exclude new media texts, we not only abdicate a professional responsibility... but we also run the risk of our curriculum holding declining relevance for students" (p. 55). It is no longer sufficient to think exclusively of written language as a means for composing rhetorically effective communications. The rise of new media has brought with it new means for expression, persuasion, and interaction with others. It

has also brought new expectations for learners and those responsible for educating them. Despite the fact that many of our students are now coming to our classes with considerable technical expertise, their work is often missing the major component we, as instructors, *can* bring to the table: instructional support of purposeful composing practices that utilize conscious selection among available meaning-making resources in ways appropriate to the intended audience and desired reception.

Beyond simply accounting for shifts in popular communication methods, embracing a broader vision of what it means to write or be literate holds great educational promise for students. Digital texts that incorporate words, images, sound, movement, and other modalities offer expanded possibilities for achieving an intended communicative outcome. Writers have an opportunity to choose the mode or medium that will best express a particular message for a given audience, purpose, and context (Dorr, 1994; Lemke, 1998; Cope & Kalantzis, 2000; Kress, 2003). Further, different modes and media afford different advantages both for writers in conveying their messages and for readers in choosing which means best support their ability to understand a text. There are many instances in which an image or sound may better convey an idea or support an argument than can written words. The prevalence of new communication media adds to the negotiations and range of possibilities students face as they consider not only what to say, but how and through which means to say it. Students can and should learn to negotiate critically which mode or medium might best inform or persuade targeted readers in a given situation. Being able to do so not only gives students more intentional control over the messages they produce but also better equips them for an increasingly digital and multimodal world where such literacy practices are expected and valued.

Technological Collaboration and Its Value for Learning

As new media technologies continue to evolve in both sophistication and range of capabilities offered, the necessity for students to collaborate on the development and composition of projects continues to grow as well. Collaboration has long been a central component in the teaching and scholarship of writing (Ede and Lunsford, 1984, 1990; Porter, 1992; Johnson, 1997), so cooperative composing of new media texts builds on an established history of theory and classroom practice. However, at the same time as collaboration in new media is similar to collaboration in print-based texts, it also entails additional activities and possibilities. As the examples that follow demonstrate, even small-scale projects require extensive, prolonged cooperation among team members. Not only is experience using communicative technologies with others an increasing expectation in both academia and the workplace (Anderson, 2007), such collaboration also offers important pedagogical and educational value. Significantly, this includes sustained interaction with others and the negotiation of multiple, sometime conflicting ideas in the composition of texts. Composing multimedia texts with others necessitates utilizing team members' differing technological expertise, exploring the multisensory ways different media function for an intended audience and purpose, and analyzing critically how ideas are presented and supported through multiple, often non-textual means.

On a concrete level, emphasis on collaboration in writing studies often focuses on helping students to work productively with others of differing backgrounds to create texts. Through classroom activities such as group discussion and peer critiques, students are encouraged to consider the views of others, as well as how they might best construct their texts to account for these varying positions while still achieving their desired rhetorical goals. Through sustained interaction with their own texts and the reactions of others, students come to see that

conceptualizations of audience change for each rhetorical situation and must be negotiated anew for each text. These practices and benefits are further enacted in the collaborative composition of new media texts where students not only have to address the concerns of readers and the differing views and approaches of others within their teams but also the communicative function of various modalities.

Putting Multimedia Composition into Practice

The Importance of Critical Framing in New Media Assignments

While scholarly calls for incorporating new media into our curricula offer great promise for teaching media-rich, rhetorically-oriented writing and communication, the integration of such composition and production work is significantly challenging, even when we have students who come to our classes with considerable writing and/or technological experience. Providing a critical frame is essential in helping students to develop a context for their composing work. Such a background not only introduces the rhetorical, communicative, and theoretical potentials of new media but also helps students to be aware explicitly of why they are being asked to engage in this work.

As part of a graduate seminar in multimedia theory and production, I wanted students to experiment with the communicative possibilities of various media and to work collaboratively with classmates to negotiate their rhetorical approach and intentions. To start building a framework for supporting these goals, I designed the beginning of the course to include theoretical readings on new media and multiliteracies and critical analysis of a variety of new media texts. Our discussions focused on how educational, scholarly, and entertainment texts employed multiple modes and narrative structures to convey their complex messages and in what

ways these were successful (or not) in engaging their audiences. Academic texts, such as Daniel Anderson's 2003 multimodal *Kairos* article, and educational texts, such as the Smithsonian's media-rich *African Voices* web site, helped to demonstrate how multiple media can be used strategically to assist users in understanding and interacting with different kinds of information. Anderson's use, for example, of both textual and video-based explanations of students' multimedia composing practices, along with samples of their finished products, worked to demonstrate his contention that even low-tech technologies can offer instructors a variety of approaches to teaching a broader range of literacies. It also allowed the voices of his students to be heard and seen firsthand in support of his argument about the educational value of these classroom activities. The *African Voices* web site illustrated how the interplay of words, images, sound, and movement can immerse users in complex subject matter and offer choices in the way they interact with that content. With these readings, analysis, and discussion as background, students developed a context for understanding some of the theoretical implications and practical applications for new media texts and could begin considering how they might realize these possibilities in the composition of their own work.

The Importance of Scaffolding the New Media Composing Assignment

Before beginning project planning and production of their own texts it is essential for students to engage in preparatory activities to help scaffold their learning of new technologies and literacies. For the first composing assignment in this course I began with construction of audio texts so that students could focus on the various media affordances (voice, music, sound effects, ambient noise) and rhetorical effects (content sequencing, transitions, sound levels, etc.) of a single modality. Although many multimedia applications have an initially steep learning

curve, multi-track audio editing applications such as Soundtrack, Audacity, and Goldwave are relatively easy to manipulate after a brief introduction and a little practice. Such applications, some available for free as shareware, provide authors with tools for editing the content of recordings, for choosing how to integrate and layer voice, music, and sound effects, and for manipulating sound levels and other audio components to convey specific meanings to their target audience.

The first step in scaffolding this assignment was designed to help students be more conscious of how complex and richly layered even the most quiet environments are. I began by having students conduct acoustic soundscape studies in which they recorded and analyzed the auditory dimensions of a particular environment such as a coffee shop, computer lab, or other local venue. They were asked to identify in a written analysis as many sound sources as possible, noting their contribution to the overall soundscape. In listening to these recordings and discussing their analyses, students noted that this exercise made them more attentive to the diversity of sounds in everyday life and the multitude of ways in which they signal information or understanding about what happens around them.

The second scaffolding activity involved acquainting students with audio editing technology and helping them to get comfortable with some of its basic functions. Students were introduced to the audio editing application Soundtrack, and were asked to create a short, non-linguistic story using only sound effects. They could select from any of the hundreds of sounds that come with the program, but they had to choose and arrange them so that they conveyed a narrative of some sort. This activity not only helped students to learn the basics of the software but also encouraged them to consider what kinds of information audiences need in order to make sense out of lots of little pieces of a larger story.

The final scaffolding activity asked students to listen to and analyze several audio narratives from programs such as *This American Life* and web sites such as *Story Corps* and *Radio Diaries*. Such activities are useful because they provide models of differing approaches to the integration of audio media and the role they play in achieving different audience reactions (anticipation, empathy, happiness, trepidation, etc.) to the material. In class we discussed the stories that were told and the ways in which different audio components, such as transitional music, background sound, and volume levels were used to support elements of the narrative, to build suspense or to offer additional meaning not conveyed in the dialogue of the story itself.

The Importance of Assignment Constraints in New Media Composing

Although the scaffolding activities provided a foundation for selecting and crafting various audio media for rhetorical purposes, setting constraints for student projects was also critical. Constraints require students to negotiate audience, approach, tone, and other rhetorical considerations and to make conscious, critical choices about what works best in a given situation. For the audio documentary assignment I designed four major constraints to which successful projects had to adhere. First, students had to work in teams of two or more to create collaborative audio texts. This required individuals to contribute their own ideas, to build on the expertise of others, and to work productively as a team to compose a text which suited the needs and interests of the group as a whole. Second, student teams had to capture a narrative recounting of an event or to investigate a question, activity, or community of people. This constraint provided a rhetorical purpose and narrowed the approach while still leaving flexibility in subject matter selection. Third, students had to consider carefully all the available auditory options that had potential for expressing meaning and intention. This included options such as contextual

voiceover material, conversation between multiple participants, relevant natural sounds, background or transitional music and sound effects. This constraint was intended to push students to explore alternative ways of conveying meaning and utilizing the ability of rhetoric to function through different sensory capacities. Fourth, I purposely limited the time of the finished documentaries to four minutes to encourage students to negotiate content, structure, and media choices within their teams. This process was vital in compelling students to be selective about their material and to be creative in how they conveyed their narratives in the time allotted. It also discouraged the inclusion of gratuitous sounds that increased media use but did not serve a rhetorical purpose.

A final requirement of the assignment was that individual students had to write a detailed reflection and justification of their project's production and authorship choices, as well as discuss their role within the collaborative team. Such reflections are critical in helping students to assess their own work, as well as being able to articulate explicitly what they learned through experience. Students were asked to use this piece of writing as an opportunity to consider what they set out to do and how they addressed the most significant challenges they faced along the way. Even in final projects that were less successful in accomplishing what authors had envisioned, the written reflections made it evident that students learned far more about the potentials of multimedia communication and collaboration from attempting to put theory into practice than they could have through reading, discussion, and analysis of others' digital texts alone.

Student Reactions and How Constraints Shaped Their New Media Composing

With critical framing, scaffolding, and assignment constraints in place, I moved to the next phase of the assignment in which students formed teams and began work on their audio documentary projects. The examples and discussion below are illustrations of the ways in which student learning about new media communication occurred through hands-on production activities. Despite their differing subject matter (everything from a reconceptualization of a Belizian folktale to living a hedonistic lifestyle to one young girl's love of football) what all of the student composing experiences had in common was intensive collaborative development and negotiation among group members about point of view and sequencing of events, the ways in which audio elements, such as volume levels, could best be manipulated to convey an intended meaning, and why particular audio choices, such as use of sound effects instead of ambient noise, were more rhetorically suited than others at a given point in the story. Even with extensive previous experience composing rhetorically effective print-based texts, students completing this multimedia project were intellectually challenged because the assignment required them to engage in a far less familiar communicative context. Such an assignment requires students to attend critically and purposefully to selection of rhetorical elements and to assessment of the different ways in which they function as meaning making resources for an intended purpose and a targeted audience. In the following sections I use examples from student projects to illustrate the role that assignment constraints played in shaping development of multimedia composing practices.

Collaboration

For each of the student teams collaboration was a challenging but beneficial component. It allowed members to draw on the differing cultural, experiential, and technological backgrounds of individuals and it provided an avenue for deciding upon and critiquing the

rhetorical impact of particular media and narrative choices from differing perspectives. An example of the value of collaboration can be seen in one student group's reinterpretation of a folktale from Belize. One group member had grown up hearing multiple versions of the legend of Xtabai, a cautionary, moralistic tale about the dangers of insincere love. One of the most difficult aspects of this group's project was deciding how to integrate the many versions of the Xtabai legend into a single, cohesive narrative. Adding to this obstacle was the need to stay within the four minute time constraint outlined in the assignment. Collaboration was key as group members proposed, tried out, evaluated, and reworked various possibilities. As one group member reported in his reflection,

Lisa, Rachel, and I ... worked well together, [but] this didn't mean we were always of one mind about what to do or how to approach the project... It also became evident that we are three different people with some significant differences, but this made for a stronger project than what each could have produced working alone... I think the collaborative nature of this assignment underscored the process for using sound effectively. (Chris)

Collaboration was also a valuable pedagogical approach with regard to learning new literacies and technologies. Many of the students in this course reported serious apprehensions both about learning new software and about making use of the technological capabilities in a purposeful way for the assignments. Working in teams allowed students to rely on the varying technical strengths and learning styles of each other and to provide support as they experienced frustrations and potentials through their experimentation. As one student reported, "Polina and I worked well together and having someone else to share anxiety with always lessens it"

(Jennifer). Others reported that the differing backgrounds of group members allowed them to learn from each other as they developed skills in new areas: “Some of us had more technical expertise and others more writing expertise, so it proved to be a good combination of skills... We all made sure we didn’t get too comfortable just doing one thing over another, but rather doing a mix of things so we each got adequate experience” (Rachel). Although many teams reported some of the usual challenges to group work (time constraints, interpersonal disagreements, etc.), they also saw value in having multiple perspectives, experiences, and technical proficiencies from which to draw when working with new media.

Media and Rhetorical Choices

Selection and compromise over media choice to achieve a desired rhetorical outcome was perhaps the most difficult but useful aspect of this assignment. Each of these development decisions about the use of available meaning-making resources demonstrates the critical thought about rhetorical intentions that groups had to negotiate in order to create a purposeful and media-rich project that balanced both their authorial intentions and the expectations of their audiences. Critical discussion about the selection and integration of various media not only improves the quality of texts produced but also provides students with valuable opportunities to learn how to work productively with others of differing perspectives.

In exploring possibilities for utilizing multiple audio options, students had to analyze the appropriateness of individual sounds for given purposes and whether or not these worked to convey both literal meaning and the tone of the story they were trying to achieve. They had to experiment with the communicative function of various audio components including meaning conveyed through both linguistic and non-linguistic content and the manipulation of auditory dimensions such as intonation, volume level, and transitions. Lastly, students had to balance their

communicative objectives with the reactions and expectations of their listeners. One example of how these composing choices played out comes from a member of a project focused on living a sadomasochistic lifestyle:

Of particular note is our choice to leave the laughter on the track instead of editing it out. While some of the other students [during peer feedback] commented on it being too lighthearted for the subject matter, they were unaware that frivolity was, in part, our aim and intentional, an expressed desire of the interviewee. The aim was not to present the subject's alternative lifestyle as dark and disturbed, but rather as another choice available to people. (Kaleb)

Here, student composers were clearly aware of how most audiences were likely to respond to content about sadomasochism, but chose consciously to work against these responses to provoke a particular reaction through the use of audio choices that seemed out of place.

Although differing in subject matter, the members of the Xtabai group were particularly interested in experimenting with issues of media choice and rhetorical intention. Their decisions about background music were especially important in how the group framed and conveyed their story. In the beginning, they chose to set it up as a recounting of a fairy tale, calling children to story time delivered by "Mister Roger's evil twin". The music is upbeat and sing-songy. As the true nature of the story begins to unfold, however, the background music transitions to a foreboding bass maintained as a sound bed for the rest of the narrative. With these auditory decisions the authors were deliberately choosing to impact the way listeners understood the story, balancing this carefully with their authorial intentions.

Time Constraints

In addition to collaboration and media selection, working within the time constraints for this assignment proved to be a constructive consideration in shaping students' composing and production activities. Having to fit their multimedia documentaries into four minutes not only encouraged students to create a meaningful text that kept audiences engaged from start to finish but also compelled groups to make hard choices about what content to keep and what to cut. Most teams recorded far more content than they could use, so debate over which ideas and information were needed to convey a coherent narrative was essential. As one member of the Xtabai group contended,

The first and probably most difficult to contend with was, by far, the time constraints. After recording the original narrative, we found that we had almost eight minutes of narrative alone... In our desire to remain within the time allotted, we had no choice but to dispense with some elements in the narrative we particularly liked—understanding all too well the importance of creative decision making. We had to select those sections that transitioned well, and that preserved the enchanting aura of the story. Having listened time and again to the original cut, we decided upon the 'gist' of the legend and inserted those aspects that heightened curiosity and interest. Even though we were disappointed in not being able to use all we had recorded, it was evident how important the 'ideal' selections had to be, considering the audience's involvement in a story such as this one. (Lisa)

Similar to the reflections of many other students, this student's comments illustrate the value of time constraints in new media assignments in encouraging careful and deliberate choices about the rhetorical value of particular communicative elements.

Changes for the Future

Of course, like any first time assignment, not every outcome of this project was ideal. Two aspects will be especially important in revising future iterations of this project. First, students could have benefited from additional direct instruction in and practice with the technical capabilities of the audio software. All groups reported their initial frustration in activities such as aligning and transitioning between various audio clips used to build their documentaries. While experimentation through trial and error is an important part of learning to use any new software application (and is a skill students must utilize to keep up with the constant evolution of applications), further demonstrations and supporting documentation would have reduced the technical impediments and increased time spent on the activities of composing and meaning making.

Second, it would have been constructive for students to have been required to be more specific in the issues analyzed in their final written reflections. While many students considered critically their negotiation over the meaning making resources they selected or the way the final project exhibited (or didn't) their authorial intentions, it would have been valuable to push students' thinking about these issues further and for them to have more explicitly connected this to the theoretical readings we had done on multimodality and multiliteracies. Additionally, in future assignments I would ask students to articulate in more depth how collaborative negotiations actually took place and what value and challenges this had for their composing process. I would ask students to compare their experience with collaboration on print texts with their experience with collaboration on this new media assignment and to discuss how and why each differed.

Lastly, while many students came into the course with anxieties about using technology and reported getting more comfortable with them through various activities and assignments, it would be useful to have them articulate the specific concerns they had and the specific educational scaffolding that supported these learning experiences in productive ways. I would use these insights to learn more about where gaps in scaffolding occurred and how these might best be supplemented in the future.

Conclusion

The critical framing, scaffolding, and assignment constraints I designed for this project provided students with a structured framework for supporting the development of new media composing practices. As instructors, it is important not only to provide a theoretical context for understanding the communicative potentials of new media, but also ample opportunities for students to experiment, collaborate, and revise their approaches to implementing multimedia in rhetorically purposeful ways.

Using multiple media to compose not only offers an occasion to convey the same idea through several means, it also allows writers to experiment with the ways in which their ideas are received by their intended audiences. Further, because multimedia composition requires an integration of content, technology, and media as meaning-making resources, collaboration is a necessary and valuable part of the process. Working together not only helps writers to negotiate their rhetorical intentions for the intended audience but also helps them to develop strategies and practices for working productively with others of diverse backgrounds and viewpoints. In each of the audio projects created in this course it was evident that working to integrate multiple media into their texts helped students to develop new literacies and provided them with rhetorical tools

for building compelling and creative communications. The ability to utilize all available communicative resources and to collaborate with others on the production of texts is vital to students as they make their way through academia and transition into professional settings.

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