

Daniel Anderson, *University of North Carolina, Chapel Hill*

Anthony Atkins, *University of North Carolina, Wilmington*

Cheryl Ball, *Utah State University*

Krista Homicz Millar, *University of Michigan*

Cynthia Selfe, *The Ohio State University*

Richard Selfe, *The Ohio State University*

INTEGRATING MULTIMODALITY INTO COMPOSITION CURRICULA: SURVEY METHODOLOGY AND RESULTS FROM A CCCC RESEARCH GRANT

BACKGROUND FOR THE PROJECT

In recent years, scholars and teachers in both the broad field of Composition Studies and the more specialized arena of Computers and Composition Studies (Yancey, 2004; Selfe and Hawisher, 2004; Wysocki and Johnson-Eilola, 1999; Ball and Hawk, 2006) have begun to recognize that the bandwidth of literacy practices and values on which our profession has focused during the last century may be overly narrow. In response, a number of educators have begun experimenting with multimodal compositions, compositions that take advantage of a range of rhetorical resources—words, still and moving images, sounds, music, animation—to create meaning.

In particular, the work of scholars in The New London Group (1996), Gunther Kress and Theo van Leeuwen (1996, 2001; also Kress, 2003), and Cope and Kalantzis (1999) explore the understanding of alphabetic writing as one modality among many that individuals should be able to call on as rhetorical and creative resources when composing messages and making meaning. These scholars argue for a theory of semiosis that acknowledges the practices of human sign-makers who select from a number of modalities for expression (including sound, image, and animation, for example), depending on rhetorical and material contexts within which the communication was being designed and distributed. They also note that no one expressive modality, including print, is capable of carrying the full range of meaning in a text, and point out that the texts sign-makers create both shape, and are shaped by, the universe of semiotic resources they access.

For educators, the implications of this scholarly work are profound. In a 1999 chapter, "English at the Crossroads," in *Passions, Pedagogies, and 21st*

Century Technologies, Kress described the impact of the exclusive focus on print and written language, noting that it

has meant a neglect, an overlooking, even suppression of the potentials of representation and communicational modes in particular cultures, an often repressive and always systematic neglect of human potentials in many . . . areas; and a neglect equally, as a consequence of the development of theoretical understandings of such modes. . . . Or, to put it provocatively: the single, exclusive and intensive focus on written language has dampened the full development of all kinds of human potential, through all the sensorial possibilities of human bodies, in all kinds of respects, cognitively and affectively. . . . (85)

If such work is rich in its theoretical grounding, however, its curricular and programmatic instantiations continue to emerge within the profession. Indeed, in 2005, when this survey was designed and conducted, a clear snapshot of who was teaching multimodal composing and at which collegiate institutions in the U.S. had yet to be reported. Nor did the profession know what new forms such composing projects were taking, how teachers were preparing themselves to design and assess these assignments, how they were motivated and recognized for such work within institutional contexts, or what environments students had access to when they undertook multimodal composing projects.

To remedy this situation, a team of researchers, funded by and working in conjunction with a research initiative of the Conference on College Composition and Communication, designed and distributed a survey focusing on multimodal composing. In the following sections, these authors provide theoretical support for using surveys in Composition research, outline the methods employed in crafting the survey, report on the data that it yielded, and provide some conclusions based on the data. Finally, the authors offer future research directions in multimodal Composition practices.

SURVEY RESEARCH IN COMPOSITION STUDIES

In examining modes of inquiry in Composition Studies, Steven North, in *The Making of Knowledge in Composition: Portrait of an Emerging Field*, notes Composition's thrift in the use of surveys as a research method (102). Although North chooses not to include survey methodology in his exploration, he points out that over 200 surveys have been conducted in Composition since 1963, a number which has increased since the 1987 publication of his book. Composition researchers have used survey methodologies to answer a range of questions, gathering information about a large population by questioning a smaller sample. As Janice Lauer and J. William Asher note, surveys provide a means for teachers to learn what others are doing, thinking, or feeling about a particular subject. They suggest several questions that researchers should consider when using surveys in

Composition Studies: who is the population, what methods were used for sampling, how were the questions theorized and written, what kind of data was collected, how many from the sample responded, and what conclusions can be drawn from the data? For our study, we would add a question that addresses the medium of survey distribution. Later, we will answer these questions to show how we constructed, distributed, and made conclusions about our survey on multimodal pedagogies. First, to situate our survey within a growing body of methodological research, we turn to the historical uses of survey methodology in Composition Studies.

Two kinds of surveys are prevalent in Composition Studies. The first is the classroom-based survey where students are surveyed at the beginning, middle, and/or end of a course. This would not involve a sample, but rather the whole population, yielding a 100 percent response rate. The second type of survey—involving universities, departments, programs, students, staff, etc.—is much larger in scope and target population. These surveys provide a template for our own work. To illustrate how surveys have been used in Composition Studies, we explore two published surveys in depth, pointing out their strengths and limitations. The surveys here were selected because they are both national surveys related specifically to Composition Studies. One survey explores graduate student attitudes toward their graduate program and the other looks at writing program administration.

Scott L. Miller, Brenda Jo Brueggemann, Dennis Blue, and Deneen M. Shepard conducted a national survey regarding graduate students' current satisfaction with their Rhetoric and Composition programs. They identified a target population, determined a sample of that population, and mailed their survey to predetermined contact persons for distribution. The authors then reported the quantitative results in "Present Perfect and Future Imperfect," demonstrating that graduate students are satisfied with their programs, but that they understand far less about the larger field of Composition and Rhetoric: i.e., "professional development issues, job market concerns, transition from graduate school to professoriate" (Miller et al. 397).

The sample population, chosen from graduate students attending 72 universities with graduate rhetoric and composition programs, was asked to rate its satisfaction with graduate experiences according to a list of 27 program features and experiences. The 72 universities were identified by means of the 1994 report on "Doctoral Programs in Rhetoric and Composition: A Catalogue of the Profession," provided by Rhetoric Review. The authors distributed the survey by using a "pre-identified contact" at each school who agreed to distribute the survey randomly. They received back 162 out of 360 surveys mailed out, obtaining responses from 63 of the 72 schools contacted (408). The survey solicited information through multiple-choice and narrative answers (similar to the open-ended textboxes we use for our survey). The way in which the survey data and the written responses were analyzed is not clear, but the authors appear to use a percentage of responses to each question and use written responses to support their quantitative data.

The strengths of this survey included identifying a sample from a well-defined population and explaining their researcher bias up front. The authors indicated that the survey, in part, represented their own interests, agendas, and departments, with all their "strengths and weaknesses, both idiosyncratic and common to the field at large" (399). They also discovered the usefulness of open-ended questions. As we prepared our survey, we replicated this idea, inserting text-boxes to allow the same kind of elaboration. These strengths helped us articulate how to select a population and to recognize our own bias when constructing the survey questions. The limitations to this study are that while the survey identifies a definite population, the methods of distribution are ambiguous. For example, Miller et al. say they mailed the surveys to pre-identified contacts at each of the 72 schools, and those pre-identified contacts were to "distribute the surveys as randomly as possible" (408). This poses an interesting issue because, if Miller et al. pre-identified the contacts, then the method of sampling should be defined as "selective" or "accidental" sampling, not random sampling. Selective sampling means that the investigator requests particular members from the identified population to participate. In addition, the authors neglect to explain how they created the questions or how those questions were field-tested. What's more, the limitations of the study include no access to the actual survey and no review of the percentage of students dissatisfied with their graduate programs (or an exploration of the nature of their dissatisfaction) which would have provided some balance in the survey results. These limitations helped us negotiate the role of presenting statistics and the role of a pilot study, which we explain below.

The second survey we explore is Carol P. Hartzog's *Composition and the Academy: A Study of Writing Program Administration*, a book-length report on issues related to "writing programs at institutions belonging to the Association of American Universities (AAU)" (ix). Hartzog claims that Composition's relation to English Studies is a tenuous one that creates intellectual problems stemming from an inability of Composition to define itself in the light of English Studies (ix). Hartzog's report relies heavily on survey data, which she uses to shape interview questions with survey respondents as a prelude to three institutional case studies. However, here, we want to highlight the ways in which Hartzog creates, distributes, and analyzes her survey for the report on college writing programs.

Hartzog's survey serves a specific purpose in that she gathers information that will point to more narrowly-circumscribed research questions rather than gather data about the field at large. In other words, the data collected via the survey allowed Hartzog to follow up with data collected from in-person interviews or phone interviews. Her interview questions grew out of the survey, giving the survey respondent an opportunity to clarify answers. Hartzog's report is based, in part, on questionnaires "mailed to 52 AAU campuses and returned by 44 program directors or department chairs" (ix). The sample she uses derives from the campuses listed as "AAU" campuses. At the time there were 52 total AAU campuses. The response rate for the survey was 79 percent (of the 52 campuses

belonging to the AAU, 41 responded). Ultimately, she concludes her study by saying that her project is an act of definition—the data collected in her project reinforces the idea that Composition, according to survey results (as well as interviews), should be an independent academic discipline, or at least one that seems to want to define itself in this manner. Likewise, our survey seeks to define multimodal compositions and their place within Composition Studies and English departments (survey as an act of definition).

The strengths of Hartzog's survey included a well-defined target population, a carefully selected sample, and an effective distribution system. There are certainly more than 52 writing programs, but, knowing that every writing program could not be surveyed, Hartzog narrows her sample down to the AAU programs, mails the survey, and achieves a high response rate. These strengths, again, reinforce the importance of sampling and population selection and contributed to how we formulated our study. Hartzog's survey has some limitations, primarily the lack of detail concerning her 42 survey questions and responses. The author is reluctant in some cases to explain in further detail what the responses mean. For example, Hartzog asks a survey question that relates to how a program budget will change over the next 5 years, but she does little to explain the importance of the question, nor can the reader infer the relevance of the question. Hartzog states that most survey respondents accrued a slight increase in funding, but she fails to contextualize the significance of this response in light of the survey goals (61–62). Both the strengths and weaknesses of these surveys provided practical guidelines for us as we conceived our own survey project.

FORMULATING THE CURRENT SURVEY

The survey used for this investigation was designed to identify how individual teachers and their Composition programs were, in 2005, working to integrate multimodality into writing classes. Our goal was to learn more about what Composition teachers were doing with multimodal composing, what technologies they used in support of composing multimodal texts, and how faculty and administrators perceived efforts to introduce multimodal composition into departmental curricula and professional development.

To formulate the questions for our initial survey draft (see Appendix A, Composition Studies Online, for the survey questions), we began with a list of questions from one of the authors' dissertations (Atkins, 2004), which used survey questions to address technology training for graduate students. We adapted these queries as needed to focus on our topic of multimodal composition, focusing on the following areas: Multimodality and Praxis, Assessment of Multimodal Compositions, Teaching Resources, Technology Resources and Infrastructure, Pedagogical and Technological Training, Assessment of Technology Training, Scholarship and Tenure/Promotion, and Individual and Program Demographics.

The resulting draft survey, divided into eight distinct sections, was designed to allow respondents to answer only the queries applicable to their situation. Graduate students, for instance, could skip questions on tenure and promotion. Section 1 of the survey, Multimodality and Praxis, addressed the various ways that programs were defining and implementing multimodality in their respective programs, asked respondents to describe multimodal assignments, requested further information about the production of such assignments, and inquired about the place of multimodality in graduate programs. Section 2, Assessment of Multimodal Compositions, asked instructors how they assessed students' multimodal compositions, and what goals and purposes informed these assignments. Section 3 of the survey, Teaching Resources, asked respondents to comment specifically on the textbooks available to support the teaching of multimodal composing. Questions in Section 4 of the survey, Technology Resources and Infrastructure, inquired about various types of classrooms, hardware, and software available to teachers and students who were engaging in multimodal composing. Questions in this section also asked about the location of computer-supported classrooms, and where/how students and teachers obtained other types of equipment such as digital video cameras, digital audio recorders, and microphones. Section 5 of the survey, Assessment of Technology Training, asked respondents to assess the efficacy and extent of technology training that students and teachers received in their program, as well as the available resources that teachers were able to access when they wanted to learn about specific technologies. Section 6 of the survey, Scholarship and Tenure/Promotion, asked respondents to describe how multimodal scholarship (and scholarship about multimodal composing) counted toward promotion and tenure in their particular department and at their institution. Section 7, Individual and Program Demographics, asked respondents to identify demographic information about their academic status, the type of institution at which they taught, how long they has been teaching, what kind of department they were a part of, and how long they had been using digital technologies to teach. The questions within this section were designed to allow for the cross-tabulation of responses for specific sub-groups within the sample.

In a series of user tests of the draft survey, the research team exchanged and revised the initial set of questions and consulted with Kristen McGowan of the National Council of Teachers of English, the organization through which the survey would ultimately be administered. After refining the questions through this process, the team constructed a second draft of the survey. This draft, in print form, was shared with ten volunteer teacher-scholars who taught Composition to make sure that the questions were clear and invited a range of responses. The results from this small test sample allowed us to change the wording of unclear or leading queries.

We then adapted what we knew about effective paper-based surveys to an online format. Several online survey engines are now available to researchers, and each has strengths and weakness. Limited engines like SurveyMonkey, for example,

provide little more than the percentage of respondents answering each question. Although such feedback might be sufficient for a simple in-class questionnaire, it did not meet the needs of our own project. WebCT and Blackboard also offer survey functions; however, neither of these tools provides cross-tabulations or measures of statistical accuracy. For the purposes of the current project, we chose the software application Zoomerang, a survey-building software package used by the National Council of Teachers of English, which we could access for free. Zoomerang provided automatic methods of filtering and tabulating data, as well as flexibility in survey design and the reporting of survey data. The final draft of the survey was then put into Zoomerang and tested one more time in its new online form to make sure that users could navigate through the various sections of the electronic survey, as well as respond easily and thoroughly to questions.

The final, online survey consisted of seven sections and 141 total questions. Given the feedback from the user tests of the survey, the research team paired multiple-choice questions with open ended-text boxes that gave respondents the chance to elaborate fully on their responses and add important information about their teaching and learning environments that could not be anticipated by a fixed set of queries. Figure 1 offers a glimpse of what respondents saw when they encountered the survey online.

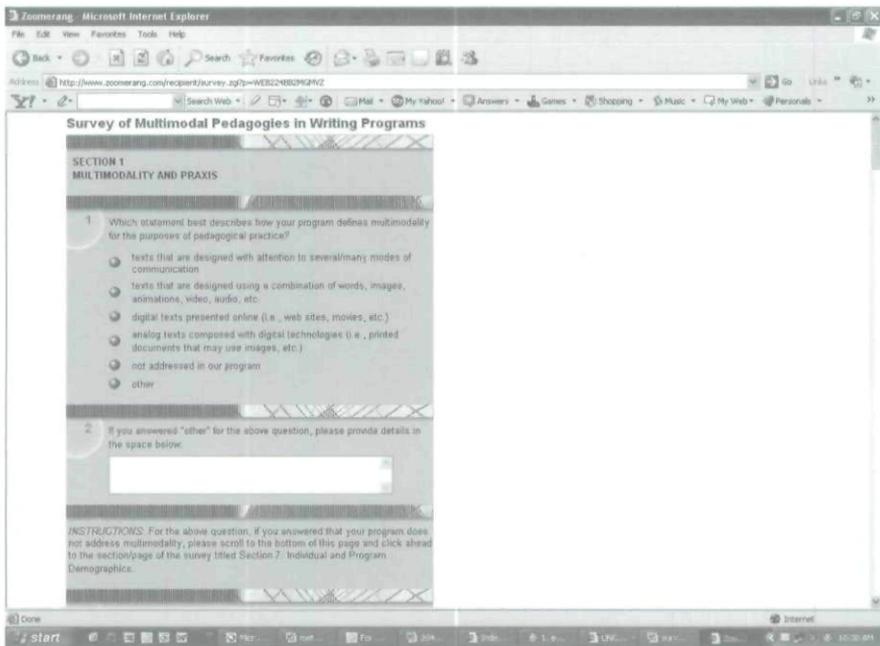


Figure 1: Sample online page from the survey.

SURVEY SAMPLE

As we have noted, the goal for the survey project was to get a contemporary snapshot of how multimodal composition was being taught in collegiate environments within the U.S. Given this goal, the research team identified faculty, graduate students, and academic staff members (computer lab directors or writing center directors) involved in teaching multimodal composition as part of Composition, Rhetoric, Professional Writing, or related programs. Since no list of schools whose writing programs were implementing multimodal composition was available (unlike the AAU and *Rhetoric Review* lists mentioned in other studies), we invited survey participants in three ways: (a) personal, email invitation to individuals in schools/programs we knew were engaged in teaching multimodal composition, (b) a general call for volunteers on listservs (i.e., TechRhet, WPA, ATTW) that served teachers of Composition broadly, and (c) open solicitations at conference presentations during sessions about our survey project. Through these three approaches we identified a pool of 80 possible respondents. We emailed all of them to ask them to participate in the survey and offered a \$50 gift certificate on Amazon.com or iTunes for those who took the time to do so. Forty-five individuals of the 80 possible participants that the team identified eventually took the survey.

Of the respondents who participated in the survey¹, 66 percent (n=29) indicated they were tenured or tenure-track faculty, 11 percent (n=5) indicated they were graduate students, and 2 percent (n=1) indicated they were non-tenure-track, "permanent lecturers" (q123). The remaining respondents (n=9) who did not identify as one of the above academic positions included "academic specialists" as well as dual-role respondents (for example, a graduate student who was also a faculty member at a community college), and those who were in between completing their Ph.D.s and starting a tenure-track job. Forty-eight percent (n=21) of our respondents have been teaching college for 10–20 years, and 36 percent (n=16) have been teaching for 5–10 years; eleven percent (n=5) have taught more than 20 years (q128). When asked how long they have been teaching with digital technology (q129), 37 percent (n=17) have been for 10 years or less; 25 percent (n=11) for 5 years or less; and 21 percent (n=9) for 15 years or less. Sixteen percent (n=7) of respondents have been teaching with digital technology for 16 or more years. Seventy-seven percent (n=34) of the respondents indicated that they were proficient or very proficient with technology (q130).

Five percent of the respondents (n=2) taught at four-year institutions, 77 percent (n=34) in programs granting masters or doctoral degrees in their departments, and 5 percent (n=2) at two-year institutions (q124). (The majority who indicated that they taught primarily in Ph.D. granting institutions/departments may have been affected by the costs of technology, software, professional development, and institutional support associated with early efforts in multimodal composing.) Of those who did not identify with any of the above choices, five of the respondents

(n=6) indicated that they taught in departmentally interdisciplinary programs or at regional branches of Ph.D.-granting institutions. Sixty-six percent of respondents (n=29) identified as working in English departments while 14 percent (n=6) identified as working in Composition/Rhetoric/Writing programs or departments (q125). Two respondents (5%) identified as working in Humanities departments.

When asked what undergraduate courses the survey takers taught (n=41), 80 percent (n=33) responded that they taught Composition, 49 percent (n=20) taught Technical Communication, 29 percent (n=12) taught Literature, and 12 percent (n=5) taught Creative Writing (q126).² Those who offered course descriptions other than those listed above (n=21) ranged from Digital Storytelling, Web Design, Developmental Writing, Cultural Studies, English Education, Rhetoric, New Media, Visual Design, Film, and Women's Studies. At the graduate level, respondents taught Composition (49%, n=20), Technical Communication (29%, n=12), Literature (7%, n=3), and Creative Writing (2.5%, n=1). In addition, twelve respondents indicated that they also taught Research Methods, Computers and Writing, Digital Rhetoric, Literacy, Teacher Education, Literary Theory, and New Media classes (q127).

Schools represented by respondents included

- Ball State University
- Clemson University
- Columbia College Chicago
- Georgia State University
- Illinois State University
- Iowa State University
- Lynchburg College
- Mesa Community College
- Michigan State University
- Michigan Technological University
- New Mexico State University
- North Carolina State University
- North Dakota State University
- Ohio State University
- Ohio State University at Marion
- Penn State Altoona
- Spokane Falls Community College
- Texas Woman's University
- University of North Carolina at Chapel Hill
- University of Pittsburgh
- University of California at Santa Barbara
- University of Florida
- University of Massachusetts, Amherst
- University of Notre Dame
- University of South Florida, St. Petersburg

- University of Washington
- University of Utah
- Utah State University
- Virginia Polytechnic Institute and State University
- Washington State University
- Washington State University, Tri-Cities (q140)

Readers will understand that the results of this survey are limited in important ways by the research team's sampling technique. Our sample was relatively small and self-selected in nature. Because no comprehensive listing of instructors who were currently teaching multimodal composition was available, the sample for our survey was limited to those individuals who read our calls on professional listservs, those who heard about our project at professional conferences, and those individuals known by or identified to research team members as we sought out possible respondents across the country. For these reasons, the sample was neither randomly selected nor systematically representative of the larger population we hoped to reach, and it was skewed toward individuals in four-year institutions and research universities (see endnote 3) who were actively writing about multimodal composing in online and print venues and discussing this topic at professional conferences. In addition, given the focus of the survey, as well as its online format, all respondents had to have access to email and the Internet, a fact that may have limited some teachers from participating.

RESULTS

Regardless of the sampling limitations, this data still provides a snapshot of how multimodal composing was being taught in collegiate writing classes in the U.S. in 2005. In the following sections, we elaborate on the survey results presenting an overview of the pedagogical, technological, and other issues teachers encounter as they work with multimodal compositions.

The Definition and Teaching of Multimodal Composition

One of the purposes of the survey, indeed, was to find out what respondents meant when they used the terms multimodal or new media to describe the instruction they provided in Composition classrooms (q1). We purposefully did not want to define these terms in order to elicit how respondents defined them, giving broad multiple-choice options in our list of possible answers. Although the authors recognize that a lack of definitions may have caused respondents to be confused about the question (or purpose of the survey), we believe that because our sample was targeted to respondents who were probably familiar with current multimodal/new media theory, we decided to abstain from defining the terms. Sixty-two percent of respondents (n=28) considered multimodal compositions to

be texts that “included a range of communicative modes including media such as audio, video, animation, words, images, and others.” Seven percent each ($n=3$) responded that multimodal compositions should be either “digital” (such as websites) or “analog texts composed with digital technologies” (such as printed documents that may include images/illustrations). Fifteen percent ($n=7$) of the respondents elected to elaborate on the answer options we provided by explaining that, as a department, they hadn’t agreed on a single definition that would support pedagogical applications of multimodal composition. The following narrative answer was typical of these elaborated responses:

In some ways, our program is in flux. While there is no specific statement regarding multimodality in our program statements, we have created specific courses and sections that focus on visual rhetoric and visual argument and have thereby been integrating multimodality into our lexicon in the manner most closely connected with the first and second definitions above [(a) texts that are designed using a combination of words, images, animations, video, audio, etc. and (b) texts that are designed with attention to several/many modes of communication]—emphasis on the digital, but not exclusively relegated to such a distinction.

While we asked about programmatic-level implementation of multimodal composition practices, we suspected that individual teachers who specialized in digital media studies were doing the majority of this work and that these efforts did not extend to department-wide or program-wide curricula. Eighty-four percent of respondents ($n=37$) indicated that multimodality was taught on an “individual teacher basis” while only 32 percent reported that multimodality was taught in specific courses (rather than by specific teachers). On both undergraduate and graduate programmatic levels, 24 percent of respondents ($n=9$ in both cases, although not the same 9 respondents in each case) indicated that multimodality was emphasized as part of the curricula, and 21 percent ($n=8$) indicated that multimodality was implemented in general-education sequences (q6). Of typical undergraduate English majors that might include multimodal composition (Writing, Literature, Technical Communication, Creative Writing, etc.), 31 percent of respondents ($n=12$) said that none of those degree programs included programmatic implementation of multimodality. At the graduate level, the percentage of respondents ($n=21$) who indicated that there was no programmatic implementation of multimodal pedagogy jumped to 54 percent (q12). As we hypothesized, the majority of multimodal composition was occurring at the individual level and not necessarily in program-wide efforts, even if curriculum committees were aware of those efforts, as indicated by the 71 percent of respondents ($n=29$) who said that they implemented multimodal composition with the support of their curricula committee (q20). An additional 17 percent ($n=7$) indicated that consent from the committee was not needed or was assumed.

One question we often hear from teachers who do not teach multimodal composition is: What is being displaced when teachers engage students in these writing practices? When our survey respondents were asked this question, 76 percent (n=31) responded that they believed nothing was being displaced (q27). Instead, these respondents described their teaching of multimodal composing as an "alteration," "shift," or "remediation" of conventional Composition instruction.

Assessment of Multimodal Compositions

Similar to what we found with the teaching of multimodal composition, 83 percent of respondents (n=35) identified that individual instructors are involved most in the development and implementation of multimodal composition assessment practices at their various institutions (q31). Only 7 percent of respondents (n=3) reported that program committee recommendations informed the design and implementation of these assessments. Respondents indicated the following sources were used for assessing multimodal compositions (q33, multiple responses possible): individual research (88%, n=37), instructors in their same department, (71%, n=30), colleagues at different universities (69%, n=29), online information outside of their home institution (52%, n=22), and instructors in other fields (31%, n=31). Less relied upon were resources attached to respondents' departments or programs: a technology consultant (26%, n=11), online information within their home institution (17%, n=7), program committee recommendations (14%, n=6), and writing center help (12%, n=5).

The goals for student learning (q36) that respondents indicated most frequently were "access to workplace skills" and "collaboration" (both 71%, n=30). Other goals that respondents indicated were access to symbolic capital (62%, n=26), multilayered voice (55%, n=23), diversity (48%, n=20), and civic pluralism (36%, n=15). Respondents specified "other" (58%, n=24) to be related to increased ability for critique or meta-cognitive awareness, "practicing new, culturally valued forms of expression" or "literacies outside of academic," "design and writing as related rhetorical skills," critical literacy, ownership or empowerment, advocacy and "increased civic voice," and "the use of a variety of tools to make meaning."

We might ask whether the chosen goals for students' learning with media Composition assignments match the criteria instructors look for when assessing these compositions. One hundred percent of respondents reported that what they looked for when assessing students' new media compositions (n=41) indicated that the "message [be] appropriately shaped for the rhetorical situation (purpose, audience, context)" (q39), and most respondents (43%, n=18) selected that criterion to be the most important (q40). The criteria that were chosen least by respondents as most important (q40) were "message was communicated clearly" (5%, n=2) and "message foregrounded a strong point or presence" (2%, n=1). The criteria that respondents reported they assessed (q39), most frequently to least, were whether

- student gained new understanding of communicating effectively (80%, n=33)
- student was actively and thoughtfully involved throughout each stage of assignment/process (80%, n=33)
- student gained new understanding of utilizing technology medium/s for communicating (78%, n=32)
- message had impact for audience/s (78%, n=32)
- message was communicated clearly (71%, n=29)
- student designed message with unique combinations of modes or materials (54%, n=22)
- message foregrounded a strong point or presence (39%, n=16)
- message utilized many persuasive strategies (39%, n=16)
- message involved readers with interactive elements (37%, n=15)
- end product showed that student clearly did a lot of work (37%, n=15)

Other criteria that individual respondents noted they looked for were “creativity—a unique and non-clichéd approach,” “demonstrated use of design concepts,” “improvement from project to project,” that “student can explain the process s/he used,” that “student can articulate and critically reflect on rhetorical choices,” and that “student gained skill/practice in communicating effectively.”

We might also ask whether the instruments and procedures of assessment align with chosen goals and criteria for students’ learning with new media compositions. Respondents indicated that rubric criteria (80%, n=33) and reflection papers (80%, n=33) were used most to assess media compositions (q37). Respondents also reported using a combination of all of the assessment choices listed in the response question (51%, n=21), the material components of the composition (44%, n=18), and usability evaluation sheets (29%, n=12) to assess what students learned. No respondents indicated that they used surveys to assess students’ learning. Other assessment possibilities noted in individual responses were: the respondent’s “own aesthetic sense,” “conversation, conferencing, dialogue, discussion,” “using other aspects to assess like the use of CSS, JavaScript, etc.,” and having students’ reflections “not always done in paper.” Most respondents indicated that assessment occurred at the beginning, middle, and throughout the course of a new media project (62%, n=26) (q38). Twenty-four percent (n=10) responded “other” and the typical response specified that they formatively assessed throughout the course of the project. Ten percent (n=4) responded that they assessed the projects only at the end, while 5 percent (n=2) indicated that they assessed at the beginning and the end of the project.

When asked to explain in narrative form the most difficult aspect of assessing media compositions (q43), the gathering and tallying of similar responses showed that those who responded (n=40) mentioned the difficulty was: having uncertainty about what is being asked of students and what is expected as final

product (15%, n=6), maintaining fairness when students have different levels of technical skill (13%, n=5), stressing to students that all components within composition have equal weight (10%, n=4), lacking clearly articulated criteria and standardized grading practices, especially when students work with a variety of tools (8%, n=3), having difficulty being critical because of aesthetic, affective, or subjective judgment (8%, n=3), separating rhetorical from aesthetic effect of the composition (8%, n=3), balancing the compensation for quality of product and effort of process (8%, n=3), getting students to self-evaluate and gain new understandings (8%, n=3), recognizing that students' work will result in unfinished, unpolished final products (5%, n=2), distinguishing between students' own learning and a "message that works" (5%, n=2), involving others, collaboration, and peer assessments (3%, n=1). Interestingly, 8 percent of respondents (n=3) noted that they find the difficulty in assessing new media compositions is no different than when assessing other compositions. Given the difficulties that respondents mentioned in the list above, we might ask how many of these can be thought about in terms of the assessment practices we know in the field and how many require new approaches.

Access to Software and Hardware

Respondents identified an assortment of programs and classes that housed some multimodal composition instruction at their institutions (for example, Rhetoric/Composition, Technical Communication, English Education, and several interdisciplinary programs) (q9). Seventy-six percent of the instructors responding to the survey (n=29) reported that they were able to teach in a computer classroom for every class meeting (q55), while others mentioned teaching arrangements that included meeting once a week in a networked lab (n=11), meeting occasionally in a lab (n=19), or meeting in a class with a projection station (n=23). Still other respondents mentioned that "many are not given the option of using computers" or, at the other end of the spectrum, that wireless laptop carts were available.

To conduct multimodal instructional efforts, the majority of responding teachers used proprietary software. For instance, respondents reported that

- 98 percent teach Microsoft® PowerPoint® (n=40) for presentations (q57)
- 98 percent teach Microsoft Word (n=40) for word-processing (q58)
- 94 percent teach Adobe® Photoshop® (n=34) for image manipulation (q59)
- 80 percent teach Macromedia® Dreamweaver® (n=32) for web design (q60)
- 71 percent teach Macromedia Flash® (n=27) for animation (q61)

Only a few respondents (1–2 for each question above) responded that they used open source or free software (such as OpenOffice, StarOffice, or GIMP) instead of the above programs.

Ninety-five percent of respondents (n=39) reported that students had access to PC desktops for multimedia production in their networked classrooms. Fifty-nine percent (n=24) had Macintosh/Apple® desktops. Some of the above respondents (n=22) indicated that students had access to both PC and Macs in their labs. Only one respondent indicated that Macs were the only available machines. Also, one respondent reported that students bring their own wireless laptops to class. When asked where students most often work on multimodal texts for class, 32 percent (n=13) reported that students composed at home (q63). Others reported that students composed in the following locations, ranked highest to lowest usage:

- departmental computer labs (12%, n=5),
- departmental computer classrooms (12%, n=5)
- classrooms that also functioned as departmental labs (10%, n=4)
- non-departmental labs (10%, n=4)
- university labs (7%, n=3)

Several respondents (n=4) also indicated that students worked in some combination of the above choices rather than mostly in one location.

When students or teachers need to use peripheral equipment like digital video cameras or other recording equipment, 29 percent of respondents (n=12) reported that they could check equipment out from a university resource center (q64). Some respondents indicated that they could get equipment from several places including the university resource center, departmental office, and the department lab; however, many of these respondents who offered “other” places to find equipment (n=13) indicated that they rely on using their own equipment, students’ personal equipment, or that the writing center (n=3; separate, in this case, from departmental labs) made this equipment available. Ten percent of respondents (n=4) indicated that no peripheral equipment was available at their institutions.

Professional Development and Institutional Incentives

One hundred percent of the teachers who responded (n=42) to how they learned the technologies they needed to teach multimodal composition were primarily self-taught (q73). However, respondents also indicated they received help learning these technologies from (most-reported to least-reported)

- institutional workshops (n=21)
- friends/family (n=20)
- professional development workshops at other institutions (n=18)
- colleagues at other institutions and/or listservs (n=17)
- lab staff (n=16)

- undergraduates/in-class assistance (n=16)
- graduate students (n=13)
- departmental workshops (n=12)

These teachers reported being largely on their own as they planned, implemented, and assessed multimodal learning experiences for students: 97 percent reported (n=40) that they trained themselves how to implement multimodal pedagogies into their classrooms, with 60 percent (the next highest reporting category with n=25) indicating that they also received pedagogical help from colleagues at other institutions and/or via listservs. When these teachers want to assess multimodal work their students composed, 93 percent (n=38) relied on their own training (q75).

In describing the workshops offered on their campus or in their departments, 58 percent of respondents (n=22) noted that they attended tool-oriented workshops. Tool-oriented workshops focus on a particular software package or application, explaining what the tool is and what it can do. Seventy-six percent (n=29) noted that a hands-on approach was used (q84), involving teachers in performing specific tasks, repeating the action of a workshop leader in (often) under-staffed settings. The above responses indicate that both kinds of workshops are sometimes held within the same institution. Sixty-three percent of respondents (n=24) indicated that workshops at their home institutions focused on software applications rather than hardware (n=9), although a few institutions offered both types of workshops (q86).

Similar reports about multimodal pedagogical training were contributed by the graduate students responding to our survey. Although preparing graduate students for future academic work, such as teaching in composition classrooms, is a goal for a number of the institutions represented in our survey, survey data did not indicate robust programs of professional development in digital contexts for these students. Although 84 percent (q56) of respondents (n=31) indicated that graduate students got the opportunity to teach using the same technology facilities (for example, networked classrooms) as faculty members, 100 percent of the graduate students responding (n=7) noted that they had to teach themselves how to implement multimodal pedagogy into their classrooms (q74 cross-tabulated with q123), although they also mentioned other places such as workshops, online colleagues, family/friends, and—in one case—GTI training, where they received additional multimodal-pedagogical support.

Only 36 percent (n=14) of survey respondents reported that their institution or department conducted “somewhat effective” technology training programs and an additional 5 percent (n=2) indicating that their institution’s technology training was “very effective” (q95). Only 5 percent of respondents (n=2) indicated that their department or institution assessed their technology training efforts in a formalized way, although 19 percent (n=7) reported that surveys were sometimes taken after workshops to assess the training (q96). According to 69 percent (n=27) of respondents, improved technology training (and the sustainability of programs)

would require "more time/opportunities to experiment with teaching/learning in digital environments" (q98).

When survey contributors were asked whether learning new technological approaches was worth the effort it required, 78 percent (n=29) reported there being no institutional reward for learning new technologies (q90). Various respondents reported that they learned new technologies because it was "important," "cool," "professional," and "useful on CVs" (q91). However, sixteen percent (n=6) of responding teachers indicated that they are paid to learn new technologies, and 8 percent (n=3) receive course releases for such efforts. In narrative responses, two respondents indicated that their reward for learning technologies was connected to small grants they could receive.

Instructional Approaches

With 93 percent of respondents (n=38) indicating that they had students analyze and compose multimodal texts (q7), respondents reported specifically assigning production of the following modes of communication (q23):

- static images like graphics, photographs (83%, n=34)
- static words and images like print advertisements, flyers or other documents (90%, n=37)
- animated images like Quicktime[®] movies (73%, n=30)
- animated words and images (no audio) like video blogs or Flash movies (76%, n=31)
- audio-only texts like soundscapes (34%, n=14)
- interactive texts (with audio) like Flash movies or DVDs (68%, n=28)

Also mentioned in the narrative comments were hypertexts and reports/documentation. When asked how many multimodal assignments were incorporated into the classes they taught, 33 percent (n=13) reported that they taught four or more of these kinds of assignments each term (q26). Some of those assignments included

- hypertext essays (80%, n=33)
- visual arguments (83%, n=34)
- technology autobiographies (34%, n=14)
- audio documentaries (27%, n=11)

while many respondents explained other assignments in the narrative question that followed (q25). Some of those assignments included image poems, PowerPoint photoessays, brochures, virtual/digital maps, professional portfolios, graphical/relational databases, collages, and interactive Flash essays, among others.

To help with instruction, the textbooks and electronic ancillary materials that survey respondents indicated using in their Composition classrooms focused more on visual modes of composing than on animation or sound as composing modalities. In narrative answers (q44), multiple respondents reported adopting the following textbooks (or other instructional materials), listed in alphabetical

order: *Convergences*, *Everything's an Argument*, ix: *visual exercises*, *Non-Designers Design Book*, *Picturing Texts*, *Seeing & Writing*, *St. Martin's Handbook*, *Understanding Comics*, *Writing About Cool*, *Writing in a Visual Age*, as well as theoretical texts for graduate classes. Fifty-four percent of respondents (n=14) indicated being "somewhat satisfied" with the ability of these instructional materials to help students analyze new media, and 19 percent (n=5) reported being "very satisfied." It is unclear, however, how far this sense of satisfaction might extend beyond the visual materials in these books to other composing modalities. Indeed, the 27 percent of instructors (n=7) who reported being "not satisfied" with the materials—in addition to the 40 percent who do not adopt textbooks at all (n=16, q44)—may have had some of these shortcomings in mind.

When asked about the instructional materials that they used to assist students in the production of multimodal compositions, 42% of respondents (n=11) indicated they were "not satisfied" with published instructional materials, and 50 percent (n=13) indicated they were "somewhat satisfied" (q46). Seventy-nine percent of respondents (n=30), for instance, reported that they'd like to see textbooks carry more "Activities instruction (e.g., tutorials for conducting research, collaborating, or composing)" in multimedia, along with more textual examples, writing and analytical assignments, and tutorials for particular software (q50). One respondent emphasized the importance of "prompts for creation of multimedia works, so students move from analysis of samples provided to producing their own work, which they can then analyze in similar frameworks." Additionally, 69 percent of respondents (n=27) cited a lack of aural production materials, and 77 percent (n=30) noted a lack of materials addressing animation and motion in available textbooks (q52).

When respondents were asked about the theoretical fields they drew from to inform their digital media teaching (q3), respondents reported the following fields outside Composition Studies:

- new media (85%, n=34),
- web design (78%, n=31),
- multimodality (78%, n=31),
- graphic design (75%, n=30)
- film theory (43%, n=17).

Respondents also listed specific theoretical sources they draw on (q137), including these five most-mentioned scholars and/or references:

- Wysocki and/or *Writing New Media* (Wysocki, Selfe, Sirc, and Johnson-Eilola) (n=16)
- Kress and/or van Leeuwen, including *Literacy in a New Media Age* (Kress); *Multimodal Discourse and Reading Images* (both by Kress and van Leeuwen) (n=14)
- Manovich and/or *Language of New Media* (n=13)
- Bolter and/or Bolter and Grusin's *Remediation* (n=12)

- New London Group and/or Cope and Kalantzis' *Multiliteracies* (n=10)

We should note that this hierarchy shows malleability since, often, single authors (such as Kress and Wysocki) were mentioned separately from their co-authored or co-edited books that made the above list. For instance, Kress was mentioned as the author of importance for several respondents (n=2) in relation to the New London Group's text, and so the authors counted him among the NLG listing instead of his own or with van Leeuwen. The reason for counting authors in such a way is because we were in search of the top-used theoretical texts (not necessarily individual authors) for multimodality. By book name only (and not including the mention of individual authors who are associated with those books), the top two sources were recorded as the New London Group's *Multiliteracies* and Wysocki, Selfe, Sirc, and Johnson-Eilola's *Writing New Media* (both n=10). Of the five works listed above, only *Writing New Media* comes from within U.S. Composition Studies.

Tenure and Promotion Concerns

Although this survey was primarily concerned with instructional approaches to teaching multimodal composition, it also asked respondents about related topics, including how their institutions regarded and rewarded digital scholarship. In this section of our survey, the response rate dropped to an average of n=30, accounting for the number of non-tenure-track faculty and graduate students who participated in the survey. This survey section began with a basic question (q99), "Does your department count electronic publications toward tenure?" Forty-four percent of respondents (n=16) chose "yes" on this question, although 22 percent of respondents (n=8) noted that no one at their institution had yet tried to gain tenure based on a record (or partial record) of electronic publication. Ninety-four percent of the respondents (n=32) said they "had" or "planned to" publish an electronic text (q103). Two respondents expressed concerns about digital publications in these terms:

I would liked to [publish] more [e-texts] but they have been disregarded in annual review conversations as not scholarly or don't count as much as print.

I will, but I will also publish conventionally—I don't think my department yet knows what scholarship in digital media looks like, or how to judge its rigor.

Twenty percent of the respondents (n=7) said that when they were hired at their current institution, the school's guidelines on electronic scholarship were not important to them, and 23 percent (n=8) indicated that they were indifferent, at the time, to those guidelines because they did not consider pursuing electronic

scholarship when they were hired (q106). Only one respondent to that question noted that the guidelines were a “top priority” at the point of hiring.

Only 5 percent ($n=2$) of the 34 respondents had published more than half of their research in electronic-only formats (q109). When respondents were asked what percentage of their already-published electronic scholarship would count for tenure or promotion (q110), 13 percent of the individuals ($n=4$) indicated they had produced electronic scholarship that did not count in such decisions. (If we subtract the respondents who had not yet published electronic scholarship [$n=10$], then the number of those who have already published electronic scholarship that did not count towards tenure jumps to 19 percent.)

Of the respondents who did report publishing electronic scholarship ($n=18$), they indicated using the following multimodal elements in those texts

- still images (83%, $n=15$)
- animations (39%, $n=7$)
- video (56%, $n=10$)
- audio (39%, $n=7$)
- written text (100%, $n=18$)

Three respondents checked having used all of the above elements in composing multimodal scholarship (q112), and 22 percent ($n=4$) also reported using “other” elements they considered multimodal including hyperlinks, interactive menus, live performance using motion tracking sensors, and databases (q113).

When we asked those who had not published electronic texts yet, 63 percent of respondents cited time issues—either time to learn new technologies ($n=4$) or time to implement that knowledge ($n=6$)—as preventing factors in producing their own digital media scholarship (q114). That is not a surprising factor considering that for those respondents who had already published multimodal scholarship ($n=16$), 31 percent ($n=5$) reported that it took them between 2–5 months to compose a scholarly text and 19 percent ($n=3$) indicated that it took them more than a year to compose their multimodal text (q121). Overall, 44 percent of respondents for that question (q121) reported that it took them anywhere from “6–9 months” to “more than two years” to complete their multimodal scholarly text.

CONCLUSIONS

The above data represents only a portion of the 141 qualitative and quantitative questions we asked participants to answer, but these results provide a snapshot of multimodal composition practices in 2005. Among the most salient conclusions suggested by the survey responses we collected are the following:

- Although teachers who responded to the survey understood multimodal composition as involving texts that combined words, still and moving images, sound, and animation, the primary instructional focus for such assignments in 2005 was on the inclusion of visual images and pho-

tographs, rather than video, animation, or sound. The definition and practices of multimodal composing may still be emerging and are most probably shaped by a constellation of factors, among them the accessibility of professional development opportunities, technology support, institutional incentives, instructional materials, and hardware.

- Teacher respondents to this survey expected students to compose multimodal texts in university computer labs or at home. Institutions, departments, and teachers who commit to multimodal composing efforts need to think about the access that working class students, married students, and parents have to safe, clean, and updated computer environments, and environments designed to support multimodal composing (Selfe, 2004) with appropriate hardware, software, mass storage, and technical help.
- Few survey respondents who wanted to learn about digital media and multimodal composition had enjoyed the support of comprehensive, cohesive, or effective professional development opportunities offered by their departments or universities. As a result, many of these teachers relied on colleagues and self-teaching.
- Teachers who assigned multimodal compositions, among our survey respondents, reported needing increasingly effective and appropriate professional development opportunities. Professional development workshops offered by institutions and departments to the survey respondents provided hands-on practice with specific software tools, but little help in conceptualizing multimodal assignments, assessing student responses, or securing the hardware needed to undertake such assignments. Therefore, we must continue to implement technology into our teacher preparation guidelines and courses.
- Teachers who were assigning multimodal compositions reported that they need increasingly effective instructional materials (e.g., textbooks, online resources, assessment approaches) designed to help students in the production of such texts.
- Scholars who compose (or want to compose) multimodal texts to advance knowledge in the field still face significant hurdles as to whether such work will count towards tenure or promotion. In addition, the dichotomy between support for teaching multimodal composition and researching (i.e., producing) multimodal composition as scholarship needs to be examined so that schools recognize this disparity between what instructors are able to teach versus what they are able to research.

In concluding the survey, we wanted to know in addition to the questions we did ask, what questions should we have asked our respondents. In turn, they provided answers that lead to further research questions we hope others will undertake. Respondents targeted their answers in a number of ways including indicating a desire for a more course-specific/focused survey, one that better addressed the impact of branch campuses within larger institutions (and, related, interdisciplinary programs partly housed in English departments) as well as the impact of locations such as Writing Centers on the overall implementation of multimodal pedagogies.

As for the first suggestion regarding a course-specific survey, the reason respondents gave for this instance of further research indicated that the broad scope of our current survey made it difficult for them to apply their own broad teaching experiences to give us the most accurate answers possible. For instance, while we had hoped to limit our target audience to those who teach in writing classes like First-Year or Advanced Composition, it was obvious throughout the survey that respondents often taught both Composition and Technical/Professional Communication classes, the latter of which has often included multimodality in the form of designing documents, web sites, and so on. One respondent clarified his/her confusion in reporting answers accurately in the survey due to having taught both kinds of classes by saying:

I realized near the end of this survey that in my own experience, I consider the second-year Communications class I've taught as a multimodal course. However, the Web Design class I currently teach, I don't instantly think of as multimodal. This is odd. I think it's because in the Communications class I had to be focused on how multimodality served the greater good of a traditional "writing" course, whereas web design is just inherently multimodal in many ways. Most of my responses were based on me thinking of the Communications class and not the Web Design class. This, I think, raises an interesting question: Have many classes been using multimodality all along and we're just beginning to "get it" in Composition? Or is it that we're just beginning to theorize it in a way that serves the basic goals of a Composition classroom? (q139)

This questioning leads us to ask: How would the survey responses be different if we had specifically targeted instructors who were only currently teaching Composition classes? Or those teaching Technical Communication classes? (And would it even be possible to separate these two audiences/participants?) Another respondent asked a similar question, saying,

The differences between implementing multimodal work in my First-Year Writing and in my elective classes seemed huge—sometimes a bit difficult to answer one question with

both [classes] in mind. In the FYW course I have a very different rationale and approach than in the elective. (q139)

So, a next research question would perhaps be to target teachers of individual courses, and to offer separate survey questions for the different fields of study within English Studies (and interdisciplinary programs).

Second, respondents at branch or sister/partner campuses indicated that they were often teaching one set of classes locally while being involved in the larger curricular issues of other campuses. As with the course-specific issues mentioned above, some respondents reported difficulty in separating their answers since their institutional organizations were often "complex and multifaceted." That is, while one campus may offer the respondent one way of answering the questions, an affiliate campus may do things differently. In addition to branch/partner campus issues, which could prove to be a useful case study on its own, another under-explored area of our survey, which we mentioned earlier, is that of two-year colleges' implementation of multimodal composition as well as that of four-year liberal arts schools.³

A third area of further research that respondents mentioned was how Writing Centers (and similar centers) function as part of a multimodal pedagogy. One respondent reported that his or her Writing Center serves the entire university (as many do) and in offering "a full range of services" and support, one could ask how tutors or coaches respond to the growing amount of multimodal work being produced by students who use Writing Center services. This is certainly an area that needs more exploration.

A fourth area of research that the team discovered in the process of composing the survey is the use/impact of online surveys. Our research team had to consider in almost every stage of the process the impact of technology on the survey and survey respondents. The survey's design, URL, storing of responses, retrieval of data, and conversion/format of data were all components to be considered. We drew on our knowledge of usability studies and web design to help inform our choices, and NCTE assisted us in this process by providing technological and administrative support (since they had a familiarity with the program), but further research into the use of online surveys as it impacts Composition Studies certainly warrants attention.

In undertaking this survey in 2005, we understood the limitations of our research but we also had hope that it would help others to jumpstart similar needed inquiries on multimodality and writing studies. In order to further those aims, we offer the data (survey questions and responses, with identifying information removed) as an online accompaniment to this article. It is our hope that other scholars can use this data as a starting point for their own research questions, to improve upon the results we offer above, as well as for administrators and teachers to draw from to support multimodal composition programs at their own institutions.

Editors' Note: Please visit Composition Studies Online at <http://www.compositionstudies.tcu.edu> for additional material related to this study.

NOTES

¹ Percentages have been rounded to whole numbers.

² In the cases where reporting indicates over 100%, respondents could choose more than one response for that question.

³ Those interested in two-year college issues in composition (including technology issues) should contact Jody Millward (Millward@sbcc.edu). Millward conducted a survey at the time this team was initiating its survey. She included two questions asking respondents whether they taught multimodal composition and whether they would be interested in a follow-up survey about it. (Millward, personal correspondence, 2005). Our survey was distributed before her results came back, so we leave it to future researchers to follow-up on this potential sample pool.

ACKNOWLEDGEMENTS

The authors would like to thank Brady Hull, Matt Bemer, Kristin McGowan, and the FHE Reading Group for their help on this project.

WORKS CITED

- Atkins, Anthony. "Digital Deficit: Literacy, Technology, and Teacher Training in Rhetoric and Composition Graduate Programs." Diss. Ball State U, 2004.
- Atwan, Robert. *Convergences: Message, Method, and Medium*. 2nd ed. Boston: Bedford, 2005.
- Ball, Cheryl E. and Kristin L. Arola. *IX: Visual Exercises*. CD-ROM. Boston: Bedford, 2004.
- Ball, Cheryl E., and Byron Hawk, eds. "Special issue: Sound in/as Compositional Space: A Next Step in Multiliteracies." *Computers and Composition* 23.3 (2006).
- Bolter, Jay David, and Richard Grusin. *Remediation: Understanding New Media*. Cambridge: MIT Press, 1999.
- Cope, Bill, and Mary Kalantzis, eds. *Multiliteracies: Literacy Learning and the Designs of Social Futures*. New York: Routledge, 1999.
- Faigley, Lester, Diana George, Anna Palchik, and Cynthia Selfe. *Picturing Texts*. New York: Norton, 2004.
- Hartzog, Carol P. *Composition and the Academy: A Study of Writing Program Administration*. New York: MLA, 1986.

- Kress, Gunther. "English at the Crossroads." *Passions, Pedagogies, and 21st Century Technologies*. Ed. Cynthia Selfe and Gail Hawisher. Logan: Utah State UP, 1999.
- . *Literacy in a New Media Age*. New York: Routledge, 2003.
- , and Theo van Leeuwen. *Multimodal Discourse: Modes and Media in Contemporary Communication*. London: Hodder Arnold, 2001.
- , and Theo van Leeuwen. *Reading Images*. New York: Routledge, 1996.
- Lauer, Janice M., and J. William Asher. *Composition Research: Empirical Designs*. New York: Oxford UP, 1988.
- Lunsford, Andrea, and John J. Ruskiewicz. *Everything's an Argument*. 3rd ed. Boston: Bedford, 2004.
- Lunsford, Andrea A., Lisa S. Ede, and Franklin E. Horowitz. *The St. Martin's Handbook*. 5th ed. Boston: Bedford, 2003.
- Manovich, Lev. *Language of New Media*. Cambridge: MIT P, 2001.
- McCloud, Scott. *Understanding Comics: The Invisible Art*. New York: Harper, 1994
- McQuade, Donald, and Christine McQuade. *Seeing & Writing 2*. Boston: Bedford, 2003.
- Miller, Scott L., Brenda Jo Brueggemann, Dennis Blue, and Deneen M. Shepard. "Present Perfect and Future Imperfect." *CCC* 48 (1997): 392-409.
- Millward, Jody. "Multimodal questions for the TYCA survey." Personal email correspondence with Richard Selfe. Mar 30 2005.
- New London Group. "A Pedagogy of Multiliteracies: Designing Social Futures." *Harvard Education Review* 66.1 (1996): 60-92.
- North, Stephen. *The Making of Knowledge in Composition: Portrait of an Emerging Field*. Portsmouth: Boyton/Cook, 1987.
- Odell, Lee, and Susan M. Katz. *Writing in a Visual Age*. Boston: Bedford, 2004
- Rice, Jeff. *Writing About Cool: Hypertext and Cultural Studies in the Computer Classroom*. New York: Pearson, 2004
- Selfe, Cynthia, and Gail E. Hawisher. *Literate Lives in the Information Age: Narratives of Literacy from the United States*. Mahwah: Lawrence Erlbaum, 2004.
- Selfe, Richard. *Sustainable Computer Environments: Cultures of Support for Teachers of English and Language Arts*. Cresskill: Hampton P, 2004.
- Williams, Robin. *The Non-Designers' Design Book: Design and Typographic Principles for the Visual Novice*. 2nd ed. Berkeley, Peachpit P, 2004.
- Wysocki, Anne Frances, and Johndan Johnson-Eilola. "Blinded by the Letter: Why Are We Using Literacy as a Metaphor for Everything Else?" *Passions, Pedagogies, and 21st Century Technologies*. Ed. Cynthia L. Selfe and Gail E. Hawisher. Logan: Utah State UP, 1999, 349-68.
- Wysocki, Anne, Cynthia Selfe, Geoffrey Sirc, and Johndan Johnson-Eilola. *Writing New Media*. Logan: Utah State UP, 2004.

Yancey, Kathleen Blake. "Made Not Only in Words: Composition in a New Key."
CCC 56 (2004): 297–328.

Copyright of Composition Studies is the property of Composition Studies and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.