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What Can Design Thinking Offer Writing Studies?

Through sharing results of an analysis of design language use in several writing studies journals, this article explores why we invoke *design* in published scholarship. After defining the approach to composing known as *design thinking*, it then moves to a comparison of design thinking and the writing process and looks at an example application of design thinking in the field. I argue that design thinking not only offers a useful approach for tackling multimodal/multimedia composing tasks, but also situates the goal of writing studies as textual action and asks us to reconsider writing's home in the university.

The notion of "design" is already seeping into writing studies
—John Trimbur, "Delivering the Message: Typography and the Materiality of Writing"

One of the most basic insights from technology design is that one key term, design, is used to designate numerous, sometimes conflicting practices
—Stuart Blythe, "Designing Online Courses: User-Centered Practices"

In "Ways of Knowing, Doing, and Writing in the Disciplines," Michael Carter categorizes disciplines at his institution into metadisciplines that share a common "metagenre," or "structure of similar ways of doing that point to similar ways of writing and knowing" (393). As part of this classification, he groups his institution's program in rhetoric, writing, and language with art and design (401). This categorization is striking. Aligning writing studies¹ with art and

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design rather than literature (which he puts into a separate category) challenges entrenched perceptions of the field—at least perceptions commonly held by those outside of the field and academia. Apart from a few stand-alone writing programs, writing studies is usually housed in English departments, institutionally associated more with literary studies than design disciplines. Yet Carter departs from this grouping and allies his program instead with design.

This move is characteristic of a growing trend in the discipline. Increasing numbers of writing studies teacher-scholars, like Carter, have invoked language of *design*.² Though Carter's gesture is part of a larger argument about writing in the disciplines and not a main focus of his piece, the fact that such a gesture is not treated with big fanfare signals the comfort that many members of the field feel using language of *design* to explain the writing practices they study, teach, and enact. Indeed, the currency of *design* is particularly apparent in how teacher-scholars talk about composing multimodal and multimedia texts: videos and websites, for example, are designed, not written. Some writing centers (e.g., Duke, Eastern Kentucky, Georgia State, Vanderbilt), moreover, have adopted the name "Writing Studio," a title situating writing as design work, as studios are often the space of design activities (see Carpenter and Apostel). What, though, do these gestures to *design* seek to accomplish? What does it mean for writing studies practitioners to engage in design work? What can *design* offer writing studies?

In his 2009 CCC article "Embracing Wicked Problems: The Turn to Design in Composition Studies," Richard Marback begins to explore these questions. He argues that appealing to the concept of *design* is a way to solve "wicked problems" in writing studies, particularly for those "teaching writing in digital media" (W397). Following design theorists Horst W. J. Rittel and Melvin M. Webber, Marback defines "wicked problems" as problems that lack a single, knowable solution but instead are ambiguous, contingent, and recursive. In other words, wicked problems are not just solved once by finding new information; they must be solved over and over again (W399). As design scholar Richard Buchanan puts it, wicked problems arise because "[t]he subject matter of design is radically indeterminate, open to alternative resolutions *even with the same methodology*"; thus, new solutions must continually be invented rather than discovered (229, emphasis in original). Marback implies, rightly I think, that the same is true for writing, and Carter makes this association explicit in grouping writing studies and design studies in the same metadiscipline.

To achieve his goal of using *design* to solve wicked problems, Marback advocates "a fuller turn to design in composition studies" (W400). For him,

making this “fuller turn” requires that scholars in the field have greater awareness of the reasons they turn to *design*: “As compositionists continue the turn to design thinking, it is important to be clear what we mean to do through our appeals to design” (W418). Writing studies has arguably not yet realized

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this “fuller turn,” and that is where this article seeks to intervene. Following Marback’s call, it begins, through sharing results of an analysis of the use of design language in several writing studies and computers and composition journals, by

exploring why we invoke *design*. It then turns to the approach to composing known as *design thinking*. After defining design thinking, the article moves to a comparison of design thinking and the writing process. Though the texts created by design thinking conventionally differ from the texts created by the writing process, this article posits that it is useful to consider what following a design thinking approach to writing would mean, particularly given gestures like Carter’s. Ultimately, I argue that design thinking offers a useful approach for tackling “wicked” multimodal/multimedia composing tasks, an approach that asks us to reconsider writing’s home in the university.

An Analysis of Use of Design Language

To better understand how teacher-scholars in the field use *design*, I read NCTE and other writing studies journal articles that explicitly use language of *design* and generated a preliminary list of categories of *design* use. Taking what Peter N. Goggin would call a “hermeneutical approach” (xiv), I then, based on this list, coded all journal articles from *College Composition and Communication*, *College English*, *Computers and Composition*, *Pedagogy*, and *Research in the Teaching of English* from their inception to the end of September 2011 that include the word *design* in their title, doing content analysis to determine the primary way each publication uses *design*.³ Table 1 shows the frequency of references to *design* in these publications.

As Table 1 illustrates, *Computers and Composition* has the most articles with *design* in their title, and *College English* has the most articles with *design* in full text. Regardless of publication venue, however, articles presenting research associated with the subfield of computers and composition are most likely to use *design* in the title of an article, at least in publications after 1980. This suggests that *design* has been particularly useful for technology-related work in the field. As writing studies continues to attend to and analyze com-

Table 1. Frequency of References to *Design* in Writing Studies Publications

Journal	Articles with <i>Design</i> in Full Text	Articles with <i>Design</i> in Title
<i>College Composition and Communication</i>	608	6
<i>College English</i>	786	2
<i>Computers and Composition</i>	477	14
<i>Pedagogy</i>	176	1
<i>Research in the Teaching of English</i>	391	3
Total	2,438	26

posing technologies in the digital turn, understanding *design* takes on even greater exigency.

The Categories of Design Use: What Do We Mean by *Design*?

Based on my analysis of these articles, teacher-scholars invoke *design* for five main reasons—that is, to accomplish five main goals.⁴ In this section, I define each category and provide representative examples.

The first reason for invoking *design* is to serve as a synonym for the words *plan* or *structure*. This use treats *design* on a lexical level, that is, as vocabulary, such as in the phrases *program design*, *course design*, or *research design*. Thus, it is the usage likely the most familiar to many readers. In some sense, this is the most banal use of *design*: publications in this category often include only one or two instances of *design* use, while publications in other categories generally include many. So I do not review in this article publications that fall in this category. Still, as it is common, particularly among older publications, this use evidences a sustained concern with the organization of scholarly and pedagogical endeavors and is an important marker of the field's interest in the efficacy of its research and teaching pursuits. Future research might analyze with what other words *design* is paired and the frequency and context of these pairings.

The second reason is to conceptualize composing as multimodal. This use of *design* coincides with the visual turn in writing studies, when teacher-scholars advocated seeing texts as visual; treating images as texts; and analyzing the rhetorical nature and function of images, layout, and other design features. This use continues as the field turns attention to video, audio, and embodied

texts. Articles in this category rely on *design* to explain multimodal elements that were in some cases viewed as less important than words or outside the purview of writing studies.

In perhaps the most explicit and sustained example of this reason, Diana George, in “From Analysis to Design: Visual Communication in the Teaching of

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Writing,” calls for approaching composition as *design* to move beyond the limited treatment of the visual that she argues has historically characterized college composition classrooms. She presents *design* as a way to get past denigrating images and embrace them as legitimate elements of composing and texts in their own right (18). Other scholars have taken George’s

directive to heart.

Kristin L. Arola offers an example of heeding George’s call and turning to *design* to conceptualize multimodal composing in her analysis of online templates. She affirms

Today, our students still choose photographs, words, sounds, and hyperlinks (clearly all rhetorical choices), but they choose colors, fonts, and shapes less and less. Instead, the platform, or more specifically the design template, is chosen for them. Those of us engaged with digital rhetoric continue to acknowledge the need to allow students to, in Rea and White’s terms, “experiment with new forms of writing,” (p. 421)[,] but we need to acknowledge and engage with the fact that new forms of writing in Web 2.0 often exclude design insofar as design is, as I define it, the purposeful choice and arrangement of page elements. Though our students may choose a template in Blogger, Bebo, or MySpace with preformatted colors, fonts, and shapes, they rarely have the opportunity to create these choices for themselves. (6)

For Arola, *design* includes the use of “photographs, words, [and] sounds” and selection and manipulation of “colors, fonts, and shapes” on a given textual canvas. Invoking *design* allows her to address the creation of multimodal texts with these elements (or, in her case, the lack of agency composers have to design with these elements when using online templates).

Heidi McKee similarly invokes *design* to explain how texts make meaning through assembling and mixing multiple modes. In “Sound Matters: Notes toward the Analysis and Design of Sound in Multimodal Webtexts,” McKee analyzes four aspects of sound—vocal delivery, music, special effects, and si-

lence—in several Flash poems to illustrate and model how teacher-scholars can help students create and evaluate compositions using sound (337). She situates her piece as a response to the question “How do we as composition instructors begin to think about and talk about sound design with students?” (336). For her, drawing on language of *design* offers an answer. McKee, for instance, explicitly notes, “I find Altman’s term *sound envelope* not only helpful for analysis but also for guiding design, providing a language for considering how a sound event might occur in a text and helping to shape the design of that text” (352, emphasis in original). As McKee’s article exemplifies, importing vocabulary from *design*, be it from visual design or, in McKee’s case, sound design disciplines, helps teacher-scholars account for and theorize compositions using multiple modalities.

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The third reason writing studies teacher-scholars invoke *design* is to recognize digital, multimedia compositions. This use of *design* signals a desire to move the field beyond a sole focus on print and to account for texts in multiple media. Though this use is closely connected to the previous use, it differs by attending more to product than to process. As publication opportunities have increased in digital media, so has the desire to explain and theorize the production, circulation, and delivery of digital texts as well as to consider the affordances of particular computer hardware and software. Publications in this category rely on *design* to do that work.

Kjartan Müller provides an example of turning to *design* to embrace and explain such work in digital media. In “Genre in the Design Space,” he argues:

In this article, I suggest a model that will help us understand the connection between composition in digital media, genre, and form. This model has its basis in design[. . .] I suggest that the term “design space” can be used. In a [digital] platform [e.g., blogs], an underlying layer defines the design space for the layer above. This design space is defined negatively by the constraints set by the underlying layer and positively by the possible space it creates for design. Design, in this case, is a neutral term that covers hardware architecture, system design, and text composition. (186, 189)

Here language of *design* serves to “help us understand” “composition in digital media” by providing a “neutral term” that allows for addressing components of digital media and to connect notions of design and genre. For Müller *design* offers a way to make better sense of the rhetorical work of digital media.

Other teacher-scholars invoke *design* not only as a way to embrace and better understand digital texts, but also as a way to apply what they learn from digital texts to print texts. For instance, Paula Rosinski and Megan Squire argue for looking to discussions of *design* in human-computer interaction to better understand how print texts (can) appeal to readers: “By studying these principles—that focus on understanding audience as an active element in the design process and that contribute to the effective design of digital interfaces—writing students

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can become savvier rhetoricians when composing in both traditional and digital media” (150). Similarly, Alice J. Robison calls for applying notions of design from video game studies to writing pedagogy: “I offer a way of thinking about [video] games’ design principles as an analogy for composition curricula, arguing that video game designers and developers discuss and approach their design processes in many of the same ways

writing teachers do” (360). For these teacher-scholars, drawing on *design* offers a perceptual lens for making sense of an inclusive range of textual productions.

The fourth reason writing studies teacher-scholars invoke *design* is to draw attention to the material conditions of composing. This use of *design* focuses on the matter and substance of writing and writing practices, including the idea of writing itself as a material artifact. Publications in this category use *design* to make visible how processes and products of writing are inherently physical, embodied, and ideological, sometimes considering ways in which they are (or can be) aesthetically pleasing. These publications emphasize the nonneutrality of forms and acts of writing.

Anne Frances Wysocki’s “awaywithwords: On the Possibilities in Unavailable Designs” illustrates this use of *design*:

It is in the apparently unavailable designs—Emily Dickinson’s idiosyncratically punctuated handwriting that has only recently been published as she spaced it on the page or a graduate-level essay composed in crayon on colored paper—that we can see what beliefs and constraints are held within readily available, conventionalized design. By focusing on the human shaping of material, and on the ties of material to human practices, we might be in better positions to ask after the consequences not only of how we use water but also of how we use paper, ink, and pixels to shape—for better or worse—the actions of others. (59)

For Wysocki, *design* encompasses “the human shaping of material” and “the

consequences” of how composers use a range of materials, including “paper, ink, and pixels.” It emphasizes the stuff needed and used to create particular kinds of compositions.

No other articles in the corpus I studied use *design* primarily for this purpose, but numerous other texts in the field do. Thus, to further illustrate this usage, I bring in here examples other than scholarly articles that include *design* in the title. Geoffrey Sirc begins *English Composition as a Happening* by pointing to a problem of design. He argues that the “architectural design” of the composition classroom significantly affects how composition (particularly first-year writing) is taught, and the prevailing design establishes the composition classroom as a museum gallery where students analyze exhibits of literary greatest hits (*English* 1–5). Part of his claim is that the field’s professionalization led teacher-scholars away from attention to the “textuality” and “craft” of writing, resulting in “a narrowing of the bandwidth of what used to pass for composition” and “a totalizing program of design control” (*English* 8, 24, 193). To combat this problem, he asserts that teacher-scholars should think of students as “designers, now, not essayists” in order to recognize and allow for the wide range of texts students produce with materials available to them (“Box-Logic” 121). Sirc uses *design* to emphasize that writing studies itself (as well as the student compositions taught in writing studies classes) is a product of physical and architectural design—of the material conditions in which teacher-scholars and students work.

The fifth reason teacher-scholars in writing studies turn to *design* is to discuss the academic discipline of design studies. This use of *design* directly and explicitly engages questions of disciplinarity. In a sense, publications in this category are most explicit about their invocation of *design* because they call attention to the discipline of design studies and ways in which writing studies should (or should not) draw on it. Publications in this category differ from those in other categories by invoking *design* to make assertions or raise questions about disciplinary boundaries and limitations or to explore interdisciplinary relationships between writing studies and design studies.

Charles Kostelnick models this use in his “Process Paradigms in Design and Composition: Affinities and Directions.” He affirms, “Given that process now has a definable history [. . .] examining similar developments in another

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field of creative problem-solving—design—can shed light on the evolution and future direction of the writing paradigm” (267). For him, in other words, the field of design studies provides an example for writing studies to learn from in

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how to deal with process (and postprocess). Marback also exemplifies this use in his article calling for a “fuller turn” to design (W400), which I reference at greater length in the introduction to this article.

Table 2 provides the classification of all articles analyzed. Organized by date of publication, it reveals that early use of *design* falls into category #1, to serve as a synonym

for *plan* or *structure*, and use has transitioned in the last few decades mostly to categories #2 and #3, to conceptualize composing as multimodal and to account for digital multimedia texts.

The answer to Marback’s question as to “what we mean to do through our appeals to design” (W418), then, is to account for multimodal and digital texts, avow the materiality of composing, and wrestle with questions of disciplinary. These intentions are both a way to establish a broader conception of composing and a way to prepare for the composing possibilities of the future.

Design Thinking: How Might We Approach Design in Relation to Writing Studies?

One way to better understand the value and potential of these uses of *design*—and thus to prepare for this broader notion of composing and the future possibilities of composing—is to consider the lens for composing known as design thinking. Design thinking is an approach to solving complex design problems that is associated with work in architecture, engineering, and art and design disciplines. It has rich interdisciplinary associations and offers a model for how we might think about situating writing in the academy.

As the previous analysis of use of design language illustrates, not everyone who references *design* refers to design thinking, so I begin this section with an explanation of this concept. Design thinking is characterized by several approaches:

- Forward orientation: Design thinking focuses on future solutions more than the past problems (Cross 79–81, 91; Kress 87; page qtd. in Jones 2, 4; Simon 133).

Table 2. Classification of Articles with *Design* in Their Titles (in reverse chronological order)

Article Title	Author	Journal and Date	Design	Notable Examples
Genre in the Design Space	Müller, Kjartan	<i>C&C</i> 28.3 2011	Digital	“The challenge has been to find a coherent model for discussing media as technology and materiality, genre as communicative action and purpose, and last but not least, for relating the dimensions of technology and genre. Having a coherent model should enable us to discuss form and formats without confusing them with other terms. This is where design can be of help, moving form from the abstract realm to a more pragmatic level suited for empirical and practical handling. On the other hand, establishing a connection between genre and design in digital media opens the possibility of using genre analysis in design research, where it can contribute to an understanding of the design process’s context through analysis of actions, motives, and objects.” (188) See also 186, 189.
The Design of Web 2.0: The Rise of the Template, The Fall of Design	Arola, Kristin L.	<i>C&C</i> 27.1 2010	Multimodal	“It is my intention, then, to encourage those of us using and teaching in the spaces of Web 2.0 to rethink the ways in which we might bring design to a discursive level, for while we might be losing the means of production, this should not keep us from questioning and embracing design’s potential. Through describing the rhetorical functions of interface design—particularly MySpace and Facebook—this paper argues that, in a Web 2.0 world, composition teachers need to engage, along with our students, the work of design.” (4) See also 6.
Strange Bedfellows: Human-Computer Interaction, Interface Design, and Composition Pedagogy	Rosinski, Paula, and Megan Squire	<i>C&C</i> 26.3 2009	Digital	“We became interested in how closely our discussions of design, implementation, and evaluation of user-centered digital interfaces mirrored our concern in composition pedagogy for helping students design, implement, and evaluate reader-centered traditional and digital texts.” (150) See also 149.
Embracing Wicked Problems: The Turn to Design in Composition Studies	Marback, Richard	<i>CCC</i> 61.2 2009	Discipline	“I believe we can benefit in our quest for a flexible design paradigm for composition studies by following up on Kostelnick’s interest in the field of design studies. In particular we can profit by following the move in design studies from a quest for a paradigm of the design process to a focus on designing as an ethical activity, a focus most clearly captured in the idea of design tasks as ‘wicked problems.’” (W399) See also W400, W415.

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Table 2. Continued

Article Title	Author	Journal and Date	Design	Notable Examples
The Design Is the Game: Writing Games, Teaching Writing	Robison, Alice J.	<i>C&C</i> 25.3 2008	Digital	"I offer a way of thinking about games' design principles as an analogy for composition curricula, arguing that video game designers and developers discuss and approach their design processes in many of the same ways writing teachers do." (360)
Learning to Write, Program Design, and the Radical Implications of Context	Massey, Lance	<i>Pedagogy</i> 6.1 2006	Plan/ Structure	"Design" appears only in the title, not in the full text.
Sound Matters: Notes toward the Analysis and Design of Sound in Multimodal Webtexts	McKee, Heidi	<i>C&C</i> 23.3 2006	Multimodal	"I find Altman's term <i>sound envelope</i> not only helpful for analysis but also for guiding design, providing a language for considering how a sound event might occur in a text and helping to shape the design of that text." (352) See also 336.
Determining Effective Distance Learning Designs through Usability Testing	Miller-Cochran, Susan K., and Rochelle L. Rodrigo	<i>C&C</i> 23.1 2006	Plan/ Structure	"The results of our study discuss not only specific principles tested in our course design but also what we learned about our specific courses, about the design of distance learning courses in general, and about usability testing for Web-based distance learning." (92)
Designing Efficient Narratives of Distance Education and Composition	DePew, Eric, T. A. Fishman, Julia Romberger, & Bridget Ruetenik	<i>C&C</i> 23.1 2006	Plan/ Structure	"As they design and execute their DE [distance education] courses, instructors—nontenurable, tenurable, and tenured—inherently face many practical and intellectual challenges." (59) See also 63.
Awaywithwords: On the Possibilities in Unavailable Designs	Wysocki, Anne Frances	<i>C&C</i> 22.1 2005	Material	"It is in the apparently unavailable designs—Emily Dickinson's idiosyncratically punctuated handwriting that has only recently been published as she spaced it on the page or a graduate-level essay composed in crayon on colored paper—that we can see what beliefs and constraints are held within readily available, conventionalized design. By focusing on the human shaping of material, and on the ties of material to human practices, we might be in better positions to ask after the consequences not only of how we use water but also of how we use paper, ink, and pixels to shape—for better or worse—the actions of others." (59) See also 56, 58.

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Table 2. Continued

Article Title	Author	Journal and Date	Design	Notable Examples
Looking for Sources of Coherence in a Fragmented World: Notes toward a New Assessment Design	Yancey, Kathleen Blake	<i>C&C</i> 21.1 2004	Digital	"And in their own design, digital compositions may unintentionally offer us new opportunities for invention, for the making of meaning." (100)
From Analysis to Design: Visual Communication in the Teaching of Writing	George, Diana	<i>CCC</i> 54.1 2002	Multimodal	See also 91, 93. "I actually believe that some tug of war between words and images or between writing and design can be productive as it brings into relief the multiple dimensions of all forms of communication." (14)
Designing Online Courses: User-Centered Practices	Blythe, Stuart	<i>C&C</i> 18.4 2001	Digital	See also 25, 26. "It has become commonplace to suggest that distance learning via the Internet forces instructors to become designers as well as teachers [...] Design is inevitable, given the practices that instructors engage in when creating distance learning resources." (329)
"Light Green Doesn't Mean Hydrology": Toward a Visual-Rhetorical Framework for Interface Design	Spinuzzi, Clay	<i>C&C</i> 18.1 2001	Digital	See also 330, 331. "Metaphor has been a success story in terms of rhetoric-based design: It has provided a way for designers to understand and conceptualize the rhetorical aspects of interface use and has furnished a grounding for visual design work." (41)
What Students See: Word Processing and the Perception of Visual Design	Markel, Mike	<i>C&C</i> 15.3 1998	Multimodal	See also 51. "The important findings concern which design features students identified and the correlations between design features and demographic features. As shown in Table 2, only seven design elements were identified by more than a third of the students. And, of these seven, three were graphics: the two screen shots and the icons. The other four—boldface, italics, numbered lists, and bulleted lists—are elements used frequently in word-processing packages." (378)
Rhetoric by Design: Using Web Development Projects in the Technical Communication Classroom	VanHoosier-Carey, Greg	<i>C&C</i> 14.3 1997	Digital	"Overall, I found Web development to be a valuable pedagogical aid in teaching technical communication. The practices involved in designing and constructing a Web site effectively modeled the abstract strategic moves central to negotiating a rhetorical situation." (405) See also 396.

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Table 2. Continued

Article Title	Author	Journal and Date	Design	Notable Examples
Competing Ideologies in Software Design for Computer-Aided Composition	LeBlanc, Paul	C&C 7.2 1990	Digital	"The question then is how do we, as a field, play a more active role in CAC [computer-assisted composition] design—in shaping the tools we and our students will work with in the future?" (13)
Process Paradigms in Design and Composition: Affinities and Directions	Kostelnick, Charles	CCC 40.3 1989	Discipline	See also 8, 11, 15 "Given that process now has a definable history [...] examining similar developments in another field of creative problem-solving—design—can shed light on the evolution and future direction of the writing paradigm. Process theories of design broadly encompass visual thinking, both applied and expressive, in a variety of disciplines, including architecture, urban planning, industrial and product design, and design education, with theoretical models developed the most intensively in architecture and in design pedagogy. As a medium for creativity and communication, design is the natural counterpart to writing, one adapting visual, the other verbal, language to diverse contexts and audiences." (267)
Response to Thomas L. Hilgers' "A Brief Note on Research Design and Reporting"	Davis, Ken	RTE 13.3 1979	Plan/ Structure	See also 269, 272. ---
A Brief Note on Research Design and Reporting	Hilgers, Thomas L.	RTE 13.3 1979	Plan/ Structure	---
The Life around Us: Design for a Community Research Component in English Composition Courses	Larmouth, Donald Wilford	CCC 23.5 1972	Plan/ Structure	---

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Table 2. Continued

Article Title	Author	Journal and Date	Design	Notable Examples
The Sense of Non-sense as a Design for Sequential Writing Assignments	Coles, W. E., Jr.	CCC 21.1 1970	Plan/ Structure	---
Flaws in Research Design	Gunderson, Doris V.	RTE 1.1 1967	Plan/ Structure	---
The Doctrinal Design of <i>An Essay on Criticism</i>	Aden, John M.	CE 22.5 1961	Plan/ Structure	---
The Antioch Design: An Undergraduate Program in Literature	Jerome, Judson	CE 21.4 1960	Plan/ Structure	---
Design for Talking Together	Lee, Irving J.	CCC 4.4 1953	Plan/ Structure	---

- Use of synthesis as well as analysis: Design thinking focuses on combination and connection of more than critique (Brown 68–70, Cross 8, 78, 91; see also Ritchey).
- Generation of many, diverse solutions: Design thinking focuses on quantity more than quality of ideas, at least initially (Brown 9; Cross 84, 92; Jones 64–66).

The scholarship of Gunther Kress helps to illustrate these orientations. As a scholar whose work is more familiar to some compositionists, particularly teacher-scholars in the subfield of computers and composition, he can provide an accessible introduction to what it means to take a design thinking

With design thinking, processes of composing are generative, not just because these activities matter in determining what products are created, but because they shape the future and motivate the ways in which we (learn to) represent and communicate.

approach to writing. For instance, in an example of reason 2 of *design* use (to explain multimodal composing/composing as multimodal), Kress explains that, with the visual turn, the goal of textual practice should be future-directed design, not past-directed critique: “While critique looks at the present through the means of past production, design shapes the future through deliberate

deployment of representational resources in the designer’s interest” (Kress, “English” 87; see also Kress, *Literacy*). *Design*, for Kress, is a way to bring about future social change through textual creation.⁵ As his work illustrates, with design thinking, processes of composing are generative, not just because these activities matter in determining what products are created, but because they shape the future and motivate the ways in which we (learn to) represent and communicate. Design thinking treats composing decisions as deliberate and consequential. A design thinking–influenced writing process, then, does not end with critique or analysis; it is not bound by the conventions of “past production” (Kress “English” 87) but analyzes in order to create. While analysis in and of itself can be generative, design thinking reinforces that analysis is often most effective as a counterpart to synthesis. In their application of Kress’s work to their study of extracurricular digital technology production, Mary P. Sheridan and Jennifer Rowsell explain a design approach this way: “design is a problem-solving practice, where people revise available resources in new ways that better meet producers’ goals. Design, then, is less a prescribed series of

practices than it is an orientation toward engaging with the world and making it more to one's own liking" (27).

Like the writing process, the process of design thinking conventionally involves several recursive steps. Just as steps in the writing process have evolved, so have steps in the design thinking process. John Chris Jones, founder of the design methods movement, included three steps: diverge, transform, and converge (61–71). The version of design thinking arguably most prevalent now, from the Stanford University d.school (or Design School), includes six steps: understand, observe, define, ideate, prototype, and test (Ratcliffe). Because of its widespread application and visibility among design practitioners and nonspecialists, I review the d.school version here as a framework for design thinking.⁶ Below I define each step and then compare and contrast it with steps in the writing process.

1. *Understand*: In the initial step of design thinking, *understand*, designers conduct primary and secondary research to gain the necessary background knowledge to move forward with their work. They survey existing material before beginning to create something new (Ratcliffe).
2. *Observe*: The *observe* step involves watching people, including how they move and interact in physical spaces, and reflecting on those observations. It also includes interviews with people about their actions and activities. In his explanation of these first two steps on the d.school website, Jim Ratcliffe explains, "[t]he understanding and observation phases of design thinking help students develop a sense of empathy." In posts about his participation in the Stanford Design Thinking Crash Course, blogger Joey Aquino identifies "seeking stories" as a primary way to conduct the observation step to cultivate empathy ("Want").⁷
3. *Define*: For the *define* step, designers focus on the needs of users and offer specific suggestions for responses that will meet those users' needs. Ratcliffe presents the formula "user + need + insight" as representative of this step. Aquino notes that the goal of the *define* step is to "create an actionable point of view (POV) which works as the foundation for brainstorming" ("Define").
4. *Ideate*: To *ideate*, designers strive to generate as many ideas as possible that can meet a user's need(s), suspending judgment about the quality or suitability of these ideas. The goal of this step is diversity. The

designer strives to come up with many options, providing alternatives should the initially selected option not work.

5. *Prototype*: For the *prototype* step, designers create a quick, rough representation of a particular idea. The form of this representation varies depending on the project and might be anything from a 3-D model to a sketch to a blueprint or another multimodal or multimedia form.
6. *Test*: The final step of design thinking, *test*, involves trying out and receiving feedback on the prototype. Designers then use this feedback to revise the prototype or to move to another option generated in the ideate step (Ratcliffe).

Table 3 shows how the steps of design thinking align with steps of the writing process.⁸

The *understand* step of design thinking connects with the research step of the writing process. Both entail gathering information needed to ground and contextualize what is produced. Design thinking's second step, *observe*, does not seem to have a clear parallel in the writing process, however. Writers do not generally observe members of their audience prior to writing for them (though in some instances they might). Certainly writing projects can involve observations as part of ethnographic research, but I would argue those activities are not the norm, at least for writing assignments apart from courses that use textbooks like Bonnie Stone Sunstein and Elizabeth Chiseri-Strater's *Fieldworking* and, when included, ultimately align more with the *understand* step of design thinking. We might consider what role observations could or should play in writing tasks, particularly those tasks that require or allow for

Table 3. Alignment of Steps in Design Thinking and the Writing Process

Design Thinking	Writing Process
Understand	Research
Observe	?
Define	Analyze audience
Ideate	Brainstorm
Prototype	Write rough draft
Test	Share and revise

multimodal elements, multimedia production, or attention to materials of composing, categories 2, 3, and 4 of *design use*.⁹

Other steps in the design thinking and writing processes correspond more closely. The *define* step of design thinking offers a way to think about audience, so it aligns with the audience analysis step of the writing process. Design thinking's *ideate* step seems to be writing's equivalent of brainstorming—though in design thinking this practice is presented as more exploratory. The *prototype* step of design thinking lines up with the “rough draft” step of writing. Design thinking presents this step as rapid, which echoes Donald M. Murray's discussion of “the act of producing a first draft” as “the fastest part of the process” (4). The final step of design thinking, *test*, matches the revision stage of writing where writers share their work and respond to the feedback they receive.

As this comparison evidences, there is a good deal of overlap between design thinking and the writing process. This close association is perhaps part of what leads Buchanan to frame design, like writing, as inherently rhetorical (228–29).¹⁰ It likewise supports Carter's alignment of the disciplines of writing studies and design studies (401).

Explicitly recognizing this close association can prepare writers to consider multiple responses to composing tasks. Design thinking, particularly with its *ideate* step, offers a capacious notion of invention. It emphasizes the importance of considering many different responses to a design task, of not getting locked into one response too early to the exclusion of other options. While the inventional activity of brainstorming, of course, is also typically part of the writing process, brainstorming does not usually focus on generating as many options as possible. Certainly the popular brainstorming technique freewriting emphasizes generating ideas without worrying about correctness, which means generating more material than one needs (Elbow 13–19); however, unlike in design thinking, the goal of freewriting is not quantity of ideas. Design thinking's attention to quantity of responses can lead designers to consider multiple options. This openness can usefully be applied to the writing process in helping to guide students away from settling on one thesis statement too early and excluding evidence that does not support their position. It can also encourage writers at all levels to make choices attentive to the affordances

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and constraints of different texts and technologies rather than merely convention, to consider multimodal and multimedia textual forms in addition to the standard print essay.

The Saving Our Stories Project: An Example Application of Design Thinking

Antero Garcia and Cindy O'Donnell-Allen's application of design thinking to their work with the Saving Our Stories (SOS) project, a summer enrichment program offered by the Colorado State University Writing Project (CSUWP), provides a useful illustration of what design thinking can offer writing studies.¹¹ SOS provides a digital storytelling workshop for fourth- and fifth-grade English Language Learners (ELLs). In a chapter of the forthcoming *The Next Digital Scholar* collection, Garcia and O'Donnell-Allen share how the steps of design thinking shaped their creation of the SOS. For their project, design thinking allows for accomplishing goals 2 and 3 for *design* use that I outline above. The SOS program involves work with multimodal elements that results in the creation of digital multimedia texts.

Garcia and O'Donnell-Allen's explanation is worth quoting at length:

In relation to the SOS Project, design-based teaching allowed us to *empathize* with ELLs' capacity for accessing their cultural identity to support their literacy development. The actionable need we *defined* was the necessity of addressing the deficiencies in the CCSS [Common Core State Standards] regarding digital literacies and cultural and linguistic diversity. Along with our CSUWP colleagues, we *ideated* possible solutions that moved beyond CSUWP's tradition of helping teachers develop theoretically sound pedagogy that supported students' acquisition of culturally neutral literacy practices like those required in the CCSS. Out of the array of possible solutions we generated (e.g., developing instructional materials, convening study groups, offering more professional development workshops), we ultimately decided to confront the problem head-on by creating a program that would reach students directly while simultaneously helping teachers address the "actionable need" in their own contexts.

We *prototyped* SOS and the concurrent Teaching with Technology workshop on a small scale the first summer, offering the programs in a limited fashion to a small number of fourth-graders, preservice teachers, and members of CSUWP. Throughout the process, we combined student and teacher feedback with reflections on our own practices to make necessary refinements. The subsequent summer, we *tested* an expanded program to include fifth-graders and opened the workshop up to teachers outside of CSUWP. We more closely aligned students' reading of culturally relevant literature to their production of more complex digital texts and expanded their contact with community members to include interviews with first-generation students and staff from CSU. (340–41, emphasis in original)

This account highlights what it can mean to apply design thinking to work in writing studies. In their explanation, Garcia and O'Donnell-Allen collapse the *understand* and *observe* steps into one step, *empathize*, to reflect an earlier instantiation of the design thinking process from Stanford's Design School. While the steps have since been updated, this conflation emphasizes how by taking a design thinking approach they situated empathy as a foundation for their project. They began by identifying a capability of ELLs that they learned through research and observation (i.e., maintaining a connection to their cultural identity) and recognizing its exigency (i.e., the importance of cultural identity in literacy development). Their sense of what ELLs need in response to the CCSS drove the project.

Garcia and O'Donnell-Allen's explanation also highlights the way in which a design thinking approach emphasizes action. They responded to what they call an "actionable need." They identified "deficiencies" in the CCSS, lack of attention to cultural diversity and culturally neutral treatment of literacy. In this way, they signal how the design thinking process has forward momentum. Once they defined a need, they responded with action. In recounting the *iterate* step, in which they reference "the array of possible solutions," Garcia and O'Donnell-Allen also illustrate the way in which design thinking encourages the generation of many potential responses. Before deciding on one course of action, the digital storytelling workshop, they considered many other options, including study groups and workshops. And taking a design approach allowed them to consider textual action that assumed different forms that "moved beyond CSUWP's tradition," looking beyond, in Kress's words, "past production" (87). It also allowed them to think in terms of collaborative responses; indeed, the options they generated all involve and require collaborative efforts to some extent.

Finally, Garcia and O'Donnell-Allen's discussion of the *prototype* and *test* steps highlights the recursive nature of the design thinking process. Garcia and O'Donnell-Allen started with a small-scale "Teaching with Technology" workshop and an SOS program for fourth graders, preservice teachers, and CSUWP teachers. Based on this prototype, they then tested an "expanded program" with fifth graders and more teachers that incorporated more primary research. This expanded program led to the SOS project that Garcia and O'Donnell-Allen describe in their chapter (and which O'Donnell-Allen outlines in greater detail on the National Writing Project's *Digital Is* website). What they designed changed as they tested their ideas and made "refinements." And what they and their audience learned—and ultimately created—grew out of that

recursive process. With a focus on connection and through the generation of multiple, varied solution possibilities, including the creation of multimodal and multimedia texts, Garcia and O'Donnell-Allen moved to textual action that met a defined need, illustrating a way in which to enact within a writing context the approaches characteristic of design thinking.

Conclusion: What Does *Design* Mean for Writing Studies?

An awareness of the categories of *design* use and design thinking raises important questions for the discipline. From individual composing projects to course curricula to program-level organization, design thinking provides new lenses

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with which to understand and approach our work. If, as Susan Miller argues, we need “general agreement over the particular set of intellectual questions” entailed by the language we use to describe our work (41), then we need to consider what

set of intellectual questions are signaled by using *design* in our scholarship and adopting a design orientation to writing. I conclude this article by considering some of these questions and implications of possible answers.

One such question is this: What does writing studies study and teach? The aforementioned gestures to *design*, because they cast a capacious view of text from invention onward, situate the goal of writing studies as to describe, explain, and enact the gamut of writing practices and products rather than to judge (or dismiss) them. Design thinking casts focus beyond word-based print composition. From this perspective, instead of lamenting the inclusion of images or sounds or movements in texts or the production of digital media, we should (indeed, must) recognize and explain the implications of their inclusion and proliferation.¹² Through the lens of *design*, a central concern of the discipline is to explore the ways in which people make meaning with any and all available resources. Any text—by virtue of being a text—is worth study. Invoking *design*, then, can serve to answer Jody Shipka's call for the discipline to focus on all communicative practices, not just writing (131–32).

When we see the product of our writing—from the outset, in invention—as potentially taking a variety of different forms, we are more likely to respect differences in our intellectual work—and difference as an inherent part of intellectual work.¹³ Concerns about expertise sometimes (understandably) greet this approach (e.g., Fish, Wooten). Are we as writing studies teacher-scholars

qualified to study and teach this range of texts that encompasses more than the written word? If we adopt a design thinking approach, we are—partly because we are able to form the collaborative partnerships necessary to do this work. Collaboration has long been a hallmark of the discipline, and rather than consider this orientation a weakness (a view unfortunately reinforced by tenure and promotion procedures that situate collaborative publications and projects as less valuable than singularly authored texts and as requiring additional justification), we need to advance it as a strength. Design projects require multiple hands and minds, and a design thinking approach to writing makes such collaboration standard, accepted, and unquestioned.

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Some changes to our graduate student training may be necessary to fully embrace a design orientation to writing. Possible changes include accepting and assigning more explicitly collaborative, multimodal, or digital seminar projects and dissertations as well as allowing or even requiring students to take courses in other fields in the same metadiscipline as writing studies. Other alterations might include encouraging students to directly observe target audiences and to provide project proposals that outline multiple possible approaches. At the core, however, many graduate programs in writing studies already equip students with the habits of mind¹⁴ and rhetorical skills required for this work—for example, an understanding of writing as a mode of thinking, an openness to revision and dialogue, an awareness of a rhetorical approach to audience, and a sense of communication as contextual and kairotic—so a design orientation does not require radical shifts from the field’s foundation tenets. It may, however, require that we work to institutionalize the openness to multiple modes and textual forms, concern with materiality, and attention to design studies that characterize the uses of *design* in our scholarship.

A second question arises: What is the goal of writing studies? From a design perspective, the goal is textual action. Gestures to *design* construct writing studies as about activity and practice. Buchanan’s work proves helpful in understanding this goal. Buchanan distinguishes design studies from science disciplines by explaining the subject matter of each: “the subject matter of design is not given. It is created[. . .] [O]f the designer, one speaks most often of creation and invention, and only casually or mistakenly of discovery. The scientist *discovers* a natural process or a natural law, but the [. . .] designer *invents* a

possible application or a new use suited to a particular product” (229, emphasis in original). Buchanan associates science with discovery (finding something that exists) and design with invention (creating something new). Drawing on *design* in writing studies, then, reinforces a focus on meaning making rather than mastery of a fixed body of knowledge. Through the lens of design, writing studies is not defined by what we know but by the ways in which we create.¹⁵

The disciplines that have traditionally relied on design thinking—architecture, engineering, design, and increasingly business—do not generally suffer the same critiques as writing studies (or English or other humanities fields) about not being sufficiently career oriented or economically generative. Perhaps taking recourse to design thinking can help us move beyond such critiques as well. In an era when the relevance and applicability of higher education is called into question, being adequately prepared to articulate the value and place of writing—in its varied forms—in the academy is crucial. Design thinking provides one way to do that. When we focus on writing as a form of action, we reinforce that writing matters. It involves ethical choices that affect audiences, writers, and materials. Of course, this idea is not new to the field. My point is that applying design thinking to writing can reinvigorate the notion that writing does work in the world. Too often, writing tasks in academia (for both students and faculty) are framed or seen as writing for writing’s sake without attention to the consequences of that writing. In focusing on action, design thinking reminds us and our audiences that writing *does* something. And we must approach it, teach it, and research it with the care that this awareness requires.

Where, then, is writing studies’ home in the university? Adopting a design orientation to writing changes how we think about university alignments and collaborations. If we follow Carter’s lead, this may mean reconsidering establishing our disciplinary home in relation to English departments. Writing studies’ place within English studies (and thus English departments) has long concerned the field, and adequately resolving such a complex issue is beyond the scope of this article. A consequence of this article’s argument, though, is that the question of how writing studies fits (or should fit) with English studies may be the wrong (or at least not the most productive) question. If we as a field take to heart the forward orientation and move to connection characteristic of design thinking, there are more fruitful questions to ask:

- Which disciplinary associations (e.g., design studies, library and information science, digital humanities, architecture, multimedia arts) are consonant with our focus and goals?

- In what ways can we (formally and informally) cultivate these relationships on curricular and programmatic levels?
- What institutional changes are necessary to do so?
- In what ways can we effectively communicate the need for these changes to the range of stakeholders affected by them?
- How can we train the next generation of writing studies scholars to enact these changes?

Design offers both a vocabulary for and a way of thinking about composing that is capacious and action oriented. It offers a robust notion of composing that cuts across disciplinary boundaries and prepares us and our students for the future possibilities of composing. When we adopt a design approach to writing, we underscore the value of our work in a world where writing continually takes new and varied forms.

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Notes

1. As *writing studies* is perhaps the more capacious title to designate the field, that is the term I use in this article.
2. I italicize *design* to signal my use of it as a term/concept.
3. Publications sometimes use *design* in multiple ways, so a single text can illustrate multiple categories of *design* use. However, one ultimately predominates. For instance, in “The Design of Web 2.0: The Rise of the Template, The Fall of Design” Kristin L. Arola studies the visual design of templates provided by digital Web 2.0 spaces, attending to the ways they limit visual design possibilities. Thus, her article uses *design* both to address the multimodal nature of composing and to account for digital texts (reasons 2 and 3 in my list). Ultimately, however, she primarily uses *design* to address issues of visual arrangement, indicating “design is, as I define it, the purposeful choice and arrangement of page elements” (6). Her primary concern, in other words, is how multimodal elements are put together and, thus, more aligned with reason 2. With my classifications, I do not wish to homogenize use of *design* within individual publications (or to homogenize the categories of *design* use themselves), but as one use usually dominates, my categorizations reflect the overall function *design* serves in a particular text.

4. I recognize the limitations of such a classification system. However, like Peter N. Goggin in his study of journal articles in writing studies, I use “a taxonomical approach in the study for rhetorical purposes [. . .] as *a way of seeing, not the way of seeing*” (65, emphasis in original). In other words, I seek not to be comprehensive with this list of reasons/goals but rather to account for and categorize the patterns I found. Certainly other texts invoke *design* for different reasons, so they do not fall into any of these categories. In fact, one of the more well-known references to *design* happens outside of these journals. In *Multiliteracies: Literacy Learning and the Design of Social Futures*, the New London Group presents *design* as the framework for its “Pedagogy of Multiliteracies,” which it defines as literacy education centered on the belief that teachers should embrace multiple media and modes of communication and their associated cultural diversity (Cope and Kalantzis 5–36, 239–48). While connected to the uses of *design* I found, this use is more specialized and explicitly focused on literacy, particularly literacy (or, rather, *literacies*) education. Moreover, other articles that significantly engage *design*, including Mary E. Hocks’s “Understanding Visual Rhetoric in Digital Writing Environments” and Glynda A. Hull and Mark Evan Nelson’s “Locating the Semiotic Power of Multimodality,” do not include *design* in their titles so are not part of the sample I analyzed. Still, focusing on articles with *design* in their titles provided a useful sample for ascertaining what work invocations to *design* seek to accomplish.

5. See the special issue of *Computers and Composition* on Kress’s work for a fuller discussion of his approach and responses, including critiques, from scholars in the field (Hawisher and Selfe).

6. As of the time of this writing, the first results returned by a Google search on “design thinking” are from the Standard Design School.

7. Aquino writes about an earlier instantiation of the Stanford d.school’s version of design thinking, when the first two steps were combined into one step, *empathize*.

8. In making this comparison, I am generalizing; I recognize there are exceptions to the ways I represent both processes. Writing studies has moved away from advancing a universal set of steps for “the writing process” (Purdy and Walker), though there remains widespread agreement about many of the practices involved. The steps of the writing process that I present in this article are those outlined in most first-year writing textbooks. By referring to “the” writing process, I do not mean to suggest or promote a universal, reified procedure. *Writing processes* would perhaps be a more accurate designation, but use of the plural noun in the article proved to be clunky and confusing, particularly as *design thinking* is treated as a singular noun in design literature. Design studies, too, has challenged approaching design thinking as a universal set of steps (Kimbell, “Rethinking,” parts 1 and 2). Indeed, this desire to move beyond a reified view of process is another important similarity between the writing process and design thinking.

9. With their case studies of professional and out-of-school digital technology producers in *Design Literacies: Learning and Innovation in the Digital Age*, Mary P. Sheridan and Jennifer Rowsell offer an example of one form such observations might take.

10. In “Rhetoric, Humanism, and Design,” Richard Buchanan links the disciplines of design studies and writing studies in his argument for “a new conception of the discipline [of design studies] as a humanistic enterprise” based in rhetoric (228–29). He explains why what to him seems to be a natural association has not been more widely adopted:

Rhetoric is still perceived by many people in its Renaissance orientation toward poetry, belles lettres, and beaux arts, rather than in its twentieth-century orientation toward technology, as the new science of art, [. . .] where art is no longer confined to an exclusive domain of fine art but extends to all forms of making. (243–44)

Design researcher Nigel Cross makes a similar claim in his assertion that “*design is rhetorical*” (31, emphasis in original). Such visions of design place design work squarely within the purview of writing studies.

11. Though this example does not involve college students in a traditional classroom setting, it involves college faculty and preservice teachers, who are or recently were college students, and so I think is of direct interest and relevance to CCC readers. Garcia and O’Donnell-Allen explicitly use design thinking as a framework in their discussion, and their approach can be applied to work with college students more generally. Within education, design thinking has begun to be taken up more by teachers at the primary and secondary levels, and Garcia and O’Donnell-Allen’s example provides a model for postsecondary teachers.

12. This focus does not mean that the field is unconcerned with or blind to potentially negative influences of new writing forms, processes, and technologies; it means that the field moves beyond resisting or denying them simply because they challenge prevailing paradigms steeped in verbal or print traditions. These traditions are an important part of writing studies’ work, but cannot be the limits to it.

13. This recognition can manifest itself in, among other results, valuation of digital and multimedia scholarship. Writing studies has been a pioneer in English studies in embracing such work, as evidenced by the CCCC position statement on “Scholarship in Composition: Guidelines for Faculty, Deans, and Department Chairs” and “CCCC Promotion and Tenure Guidelines for Work with Technology.” Design thinking is consonant with this movement.

14. I choose the phrase “habits of mind” deliberately here as this phrase is used in *The Framework for Success in Postsecondary Writing* produced by the Council of Writing Program Administrators, National Council of Teachers of English, and

National Writing Project. My sense is that we need to look at the ways in which our training of graduate (not just our undergraduate) students cultivates these same ways of thinking.

15. From this perspective, the argument that invoking *design* is another example of writing studies practitioners importing from another field when they should focus on building writing studies' own knowledge base is wrongheaded.

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