Writing across the curriculum (WAC) activities and assignments have typically been characterized as fitting into one of two categories: writing to learn (WTL) or writing in the disciplines (WID, sometimes referred to as “writing to communicate”). This article suggests that WTL and WID are better viewed as the ends of a spectrum of WAC activities and assignments. Between WTL and WID, a third set of activities and assignments, writing-to-engage (WTE), offers a promising means of extending the critical thinking involved in WTL, engaging students in critical thinking about disciplinary knowledge and processes, and laying additional groundwork for writing to communicate within a discipline or profession. Drawing on Bloom’s taxonomy of cognitive skills as modified by Anderson and Krathwohl (2001), this article argues that WTE activities and assignments offer additional precision and nuance for understanding how writing can be used to support learning in courses that employ WAC pedagogies.

Keywords: Writing Across the Curriculum, WAC, Critical Thinking, Writing to Learn, Writing in the Disciplines, Writing to Engage

For nearly two decades, I’ve been troubled by the limited vocabulary I’ve been able to draw on as I discuss writing across the curriculum (WAC) activities and assignments with colleagues inside and outside my discipline.1 When I began learning about WAC in the 1980s, I was presented with and readily accepted a clear dichotomy: WAC activities and assignments could fall into one of two categories, either writing-to-learn (WTL) or writing in the disciplines (WID). WTL focused on exploring key concepts, processes, and interpretive frameworks in a given discipline, while WID (sometimes referred to as writing to communicate) focused on preparing students to carry out the communication tasks typical of a given discipline or profession.

While I was still relatively new to WAC, it seemed as though the boundary between writing to learn and writing in the disciplines was clear and well understood.2

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1. I am grateful to Linda Adler-Kassner, Chris Anson, Sue McLeod, and the anonymous reviewers at The WAC Journal for their thoughtful feedback on drafts of this article.

2. In some cases, that boundary extended to how best to characterize WAC programs in general, with some colleagues referring to “WAC/WID programs” in a nod to the idea that some
Later in my career, however, a few years after I began directing my university’s institute for learning and teaching, I found myself questioning it. I had learned quickly as director of the institute that, while improving teaching and learning seemed to be universally viewed by faculty members as a worthwhile endeavor, it did not elicit the same level of enthusiasm (translation: participation) that accompanied initiatives designed to enhance student critical thinking. As a result, by the end of 2007, about fifteen months after I began directing the institute, nearly all of our professional development workshops, discussion groups, retreats, and conferences included attention to improving students’ critical thinking.3

In 2008, with this focus on critical thinking in mind (and with an eye toward strengthening our local WAC initiative), I began to explore the connections between critical thinking and WAC. I considered the implications for our WAC initiative of a range of cognitive, affective, and developmental frameworks, including those developed by Benjamin Bloom and his colleagues (Anderson & Krathwohl, 2001; Bloom, et al., 1956; Krathwohl et al., 1956), Lev Vigotsky and other Soviet-era psychologists (Leontiev, 2005; Leontiev & Luria, 2005; Vygotsky, 1978, 1987), Jean Piaget (1936, 1970), William Perry (1970, 1981), and Patricia King and Karen Kitchener (1994, 2004). Linking WAC and critical thinking was, of course, far from a novel idea. I benefited from the efforts of numerous colleagues in the WAC community, among them Sue McLeod (2000/1988; McLeod & Maimon, 2000; McLeod et al., 2001), John Bean (1996, 2011), Elaine Maimon (2001), David Russell (1990, 1991, 2002), Judith Langer and Arthur Applebee (2007/1987), Marty Townsend and Terry Myers Zawacki (Townsend, 2001; Townsend & Zawacki, 2013), Jacqueline Jones Royster (1992), Art Young (A. Young, 2011/2006; Reiss & Young, 2001), Christine Farris (Farris et al., 1990), Chris Anson (Anderson et al., 2015, 2016; Anson, 2017; Rutz, 2004), Teresa Redd (2018), and Bill Condon (Condon, 2001; Condon & programs focus primarily on writing to learn while others focus primarily on writing to communicate in disciplines and professions (see, for example, Robert Ochsner and Judy Fowler’s 2004 review of WAC and WID scholarship and, more recently, the 2020 call for a special issue of Across the Disciplines on “STEM and WAC/WID” at https://wac.colostate.edu/ard/calls/stem-and-wac-wid-co-navigating-our-shifting-currents/). For a useful corrective, see Sue McLeod and Elaine Maimon’s (2004) article, “Clearing the Air: WAC Myths and Realities.”

3. From one perspective, this might seem as though it were primarily a marketing decision, since enhancing students’ critical thinking skills requires improved teaching and learning. And, to some extent, marketing considerations played a role in the decision. But a focus on critical thinking can encourage broader discussions of how to improve teaching and learning, such as shifting our focus from an emphasis on technique (how to teach, for example, and how to encourage learning) to an emphasis on aligning what we do in our courses with our overall teaching and learning goals (what we teach and what students learn). My conclusion, then and now, is that a focus on critical thinking deepens the discussions of curricular goals, teaching strategies, and the conditions that lead to learning.
Kelly-Riley, 2004; Condon & Rutz, 2012).\(^4\) The work I was reading helped me begin to define the problem in a way that would lead me to rethink my understanding of WAC.

### Defining the Problem

My efforts to design professional development activities that linked critical thinking to WAC led me to experience what John Dewey called a “felt difficulty” (1910, p. 72), a concept my mentor and friend Richard Young introduced me to in one of his graduate seminars. Dewey described the idea as a sense of “undefined uneasiness and shock,” which can productively lead to a more defined understanding of a problem (1910, p. 72). My sense of unease with the WTL/WID dichotomy arose as I began using a technique that had proven effective as I’d worked with faculty members from across the disciplines—analyzing their assignments, quizzes, and examinations to identify the kinds of critical thinking they were asking students to carry out. I’d found it helpful, for example, to draw on Bloom’s taxonomy (as modified by Lorin Anderson and David Krathwohl, and which I’ve modified further to include reflecting) to point out that a midterm examination in an upper-division course involved, for the most part, only two of the cognitive skills identified by Bloom and his colleagues, such as remembering and understanding, rather than the larger set of skills they had hoped students would also use, such as reflecting, applying, analyzing, and evaluating (see Figure 1).

![Bloom's Taxonomy](image)

Figure 1. Bloom’s Taxonomy as modified by Anderson and Krathwohl (2001) and modified further to add reflecting as a distinct cognitive skill.

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\(^4\) Bill served as the keynote speaker for our institute’s first conference on teaching, learning, and critical thinking in May 2007.
As I looked more carefully at the kind of work encouraged by many write-to-learn activities and writing-in-the-disciplines assignments, I realized that I was looking at a bimodal distribution. WTL activities focused more often than not on what are now commonly (if perhaps inaccurately) called lower-order thinking skills (in Bloom’s modified taxonomy, remembering and understanding), while WID activities and writing assignments tended to focus on what have been characterized as higher-order thinking skills (which build on and encompass all of the other critical thinking skills in the taxonomy). There appeared to be, however, less explicit attention to the middle ground, the kinds of critical thinking that are often encouraged in sophomore- and junior-level courses.

This concerned me, particularly given the recognition that students often experience difficulty during their second and third years (Ennis-McMillan et al., 2011; Sterling, 2018), when many faculty members in their major area of study are expecting students to shift from an emphasis on recalling and demonstrating an understanding of key concepts and processes to beginning to apply that knowledge to key issues in their discipline and to engage in exploration, analysis, and evaluation of complex sets of information, ideas, and arguments. If WAC activities and assignments are to contribute to success at this point—and there is no doubt that they can—it seemed as though we would benefit from an expanded vocabulary for explaining how they could be used to help our students succeed.

I want to emphasize again that the key issue I was wrestling with was one of emphasis and definition rather than an argument that WTL cannot involve the full range of critical thinking skills. As my colleagues Marty Townsend and Terry Myers Zawacki have told me (personal communication, December 2018), it’s inaccurate to characterize WTL activities and assignments as involving only remembering, understanding, and reflecting. Although far from a majority, many WTL activities and assignments engage students in applying, analyzing, evaluating, and creating. This is the case with a number of the assignments described in John Bean’s book *Engaging Ideas*. It is true of others as well. Robert Irish (1999), for example, describes WTL assignments that engage engineering students in application, analysis, and in some cases evaluation. “Carefully designed writing assignments can play a significant role in enticing students into critical thinking at higher levels,” he wrote, noting that “Perry and Bloom provide valuable schemes to focus assignments for writing-to-learn” (p. 96). More recently, Justin Rademaekers (2018) explored the role critical thinking plays in writing-to-learn and writing-in-the-disciplines activities and assignments. He noted that “as faculty and WAC directors get specific about the kind of critical thinking a course is seeking from students, informal and writing-to-learn assignments can be discussed as important tools for helping students practice the kind of thinking their instructors want to encourage in their writing” (p. 122). Similarly,
Chris Anson has observed, “It’s important to think about the intellectual activities that lie beneath WTL assignments. It’s possible to design them so that they not only are capable of being completed in one draft, but also require rigorous underlying cognitive operations” (personal communication, September 2020). Anson (2017) recently explored this approach by reporting on WTL activities that linked reading with brief writing assignments, arguing that they can “engage students in deeper and more intellectually meaningful reading through brief, imaginative, focused writing assignments in a variety of genres” (p. 23).

Typically, WTL activities and assignments focus more on acquiring and gaining control over new knowledge than on applying, analyzing, or evaluating that knowledge. Yet, as Townsend, Zawacki, Irish, Rademaekers, and Anson have observed, these activities can involve the use of a wide range of critical thinking skills. McLeod and Maimon (2004) echo this argument, pointing out, “The purpose of writing to learn assignments—journals, discovery drafts, in-class writing—is to use writing as a tool for learning rather than a test of that learning, to have writers explain concepts or ideas to themselves, to ask questions, to make connections, to speculate, to engage in critical thinking” (p. 579). Their reference to explaining, asking questions, and speculating point toward remembering, understanding, and reflecting, while their reference to making connections and engaging in critical thinking suggest additional cognitive skills. As such, they leave open the possibility that WTL activities and assignments can engage students more deeply in exploring disciplinary knowledge, even though the majority of them do not.

With this in mind, it makes sense that the most commonly assigned WTL activities can be characterized as what Peter Elbow (1997) has called low-stakes writing. These activities are often ungraded and may receive little or no feedback from instructors. WTL activities are also typically writer-based (Flower, 1979), with little or no attention to an audience beyond the writer. Examples include freewriting and brainstorming, summarizing and responding to readings, reflecting on class sessions, defining concepts, describing processes, listing important ideas and questions about a subject, mapping and clustering, and developing outlines (see, for example, Bean, 1996, 2011; Beers & Howell, 2005; Knipper & Duggan, 2006; R. Young, 2011; Zinsser, 1988). The majority of these activities do little to engage students in the kinds of sustained critical thinking that go beyond the poorly named lower-order thinking skills often associated with introductory survey courses.

The problem I found myself addressing, then, became one of definition: how best to characterize writing activities that led students to engage in a larger number of the critical thinking skills defined by Bloom and his colleagues. I asked myself how I might describe to colleagues outside of writing studies those WAC activities and assignments that did not fit neatly into WTL or WID.
Defining Writing to Engage

As the title of this article suggests, writing-to-engage activities and assignments occupy a middle ground between typical writing-to-learn and writing-in-the-disciplines activities and assignments. This middle ground allows WAC scholars to explore assignments well suited to helping students move beyond their initial understanding of disciplinary content and processes to a deeper engagement with the information, ideas, and arguments central to a discipline. Writing to engage can thus be seen as falling along a spectrum between writing to learn and writing in the disciplines (Figure 2).

Figure 2. WAC activities and assignments are aligned along a spectrum of critical thinking skills.

Writing to engage is well suited to encouraging the use of cognitive skills such as reflecting, applying, analyzing, and evaluating, skills that are valuable for grappling with the information, ideas, and arguments within a discipline. The writing produced through WTL activities and assignments are less likely to resemble formal, discipline-based writing, but they can center students’ attention on issues that are central to the discipline. For example, one of my colleagues from sociology told me that he had assigned a brief report that asked students to apply a sociological theory they had been discussing in class to a YouTube video that showed interactions among a particular group of people. He described the assignment as, essentially, “You’ve studied two approaches to this area. Here’s a video. Watch it. Pick one of the approaches. Apply it. And then tell me why you didn’t pick the other approach.” Certainly, this isn’t writing that would be published in a sociology journal, but it engaged his students more deeply with the theoretical frameworks they were exploring in the course.

Writing-to-engage activities could work well in a second-year or third-year course. They might also be used in a course offered toward the end of a student’s first year. I’ve found the concept useful because it has helped me—and more importantly the faculty members I’ve worked with—better understand the range of activities we can ask our students to carry out. While some of my WAC colleagues will certainly observe that what I’m describing is far from new, I believe there is value in rethinking the long-standing WTL/WID dichotomy. Doing so will allow us to better understand what we are asking our students to accomplish and help us do a better job of
deciding when and how to use writing activities and assignments to engage students in the content and processes they’ll work with in their major areas of study and, eventually, in their professions. In Table 1, I lay out the distinctive characteristics of writing to learn, writing to engage, and writing in the disciplines.

Table 1.
Approaches to WAC5

<table>
<thead>
<tr>
<th>Writing to Learn</th>
<th>Writing to Engage</th>
<th>Writing in the Disciplines</th>
</tr>
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<tbody>
<tr>
<td>Using writing to help students remember, understand, and reflect on course concepts, conceptual frameworks, skills, processes.</td>
<td>Using writing to help students assess and work with course concepts, conceptual frameworks, skills, and processes.</td>
<td>Using writing to help students learn how to contribute to discourse within a discipline or profession.</td>
</tr>
</tbody>
</table>
| Best characterized as “low-stakes” writing:  
  - The focus is on content; recognizing that students often struggle with new ideas, little or no attention is given to form.  
  - Limited feedback, if any, is provided by the instructor. | Can be characterized as either “low-stakes” or “high-stakes” writing, or it might fall somewhere between the two. WTE assignments can:  
  - Build on WTL activities and assignments  
  - Support a higher level of engagement than WTL activities and assignments  
  - Focus on reflecting, applying, and analyzing and might include some attention to evaluating | Best characterized as “high-stakes” writing:  
  - A greater investment of instructor time is required for designing and responding to student writing.  
  - There is greater potential for student academic misconduct, especially among students who lack confidence in producing original work. |
| Typical activities include:  
  - In-class responses to prompts  
  - Reflections  
  - Summary/response  
  - Forum discussions  
  - Definitions and descriptions | Typical activities include:  
  - Application of frameworks to texts, media, and cases  
  - Evaluations of alternative approaches and methods  
  - Reflections, critiques, and comparisons  
  - Topic proposals, progress reports, and other brief reports | Typical activities include:  
  - Articles and essays  
  - Presentations  
  - Longer reports  
  - Poster sessions |

Complicating Writing to Engage (and Writing Tasks in General)

Arranging writing activities along a spectrum of critical thinking skills suggests other ways that might be used to consider various ranges of writing activities. We might, as Anson (2017) has done, arrange writing tasks or genres along a spectrum from low-stakes to high-stakes writing. We might consider the rhetorical effectiveness of

5. This table is based on a keynote presentation I delivered at the Second Conference on English Across the Curriculum in Hong Kong (Palmquist, 2018). That presentation was subsequently adapted for inclusion in an edited collection that emerged from the conference (Palmquist, 2021).
writing along Flower’s spectrum of writer-based to reader-based prose. We might align writing along a spectrum of personal to public. We might do the same by aligning writing activities and assignments along a spectrum of meaningfulness, building on the work of Michele Eodice, Anne Ellen Geller, and Neal Lerner (2017a, 2017b, 2019). Of these, the low-stakes/high-stakes and meaningfulness continuums might have the most relevance to WAC activities and assignments.

Recently, Chris Anson shared his thoughts about low-stakes and high-stakes writing:

I see writing on a continuum of informal/low stakes to formal/high stakes. The lowest stakes are really just self-directed reflection, informal in nature and not audience directed; the highest stakes are dissertations (in academic settings). Then along the way are various gradations of WTL assignments, some of them focusing on lower-order processes and then ramping up toward higher-order ones. (personal communication, September 2020)

Anson’s spectrum is perhaps best illustrated in his chapter in Alice Horning’s edited collection *What Is College Reading?*, in which he places genres ranging from journal entries and reading logs to term papers, reports, and formal essays along a spectrum moving from low-stakes to high-stakes writing (2017). Given the role these stakes play in the design of WAC activities and assignments, we might consider combining a critical-thinking-skills spectrum with a low-stakes/high-stakes spectrum, as shown in Figure 3. In this approach, we might ask where a particular writing activity or assignment fell in the field defined by the two axes, Bloom’s modified taxonomy and what was at stake for the student writer. The goal would be to understand both the types of critical thinking an activity or assignment might lead students to engage in, the effort they might reasonably expect their instructors to put into evaluating and responding to the assignment, and their perceptions of the importance of that evaluation.

![Figure 3. Two axes define a two-dimension space—essentially a grid—within which](image)

Figure 3. Two axes define a two-dimension space—essentially a grid—within which
Eodice, Geller, and Lerner’s Meaningful Writing Project (http://meaningfulwritingproject.net) offers another useful spectrum through which we might consider the factors that lead students to engage critically with a writing activity or assignment. Based on a study that involved surveys of students at three universities, follow-up interviews, collection of student writing, and collection of writing assignments, the project considers factors that led students to think of specific writing assignments as meaningful. Eodice, Geller, and Lerner (2017b) reported that “students find writing projects meaningful when they have opportunities to connect on a personal level, to find meaning beyond the specifics of the assignment itself, and to imagine future selves or future writing identities connected to their goals and interests” (para. 21). They suggested as well that instructors who assigned writing that was reported as meaningful by students “often deliberately built these qualities into their teaching and curriculum” (para. 3).

Meaningfulness seems to provide another measure of student willingness to engage fully in the kinds of critical thinking required to carry out a writing activity or assignment—perhaps even more so than the consequences students face if they do well or poorly. Combining all three aspects of writing would provide us with a three-dimensional space (it could be represented as a cube or a sphere) within which we could consider the design of a writing task (see Figure 4).

While writing to engage is rooted in an alignment of a writing task with a modified version of Bloom’s taxonomy of cognitive skills, it involves more than viewing that writing task along a single spectrum. If we want students to put in the effort needed to engage in various types of critical thinking, we must not only design the activity or assignment to lead students to carry out particular kinds of thinking but also consider what is at stake for the student and the likelihood that they will find the work meaningful. Our students will ask reasonable questions: How much effort
do I need to put into this? What are the consequences of performing well or poorly? How meaningful do I find this? What kind of critical thinking skills can I bring to bear on this assignment or activity? How can I apply what I’ve already learned to the task at hand?

The answers to these questions suggest that designing a successful WTE activity or assignment will involve far more than a deep understanding of critical thinking. It will require instructors to draw on their expertise as teachers, their experiences as writers, and their awareness of what they must do to provide appropriate feedback to their students.

Conclusions

I’ve found value in mapping WAC activities and assignments to a spectrum defined by a widely used taxonomy of cognitive skills. It has allowed me to set aside the idea that writing to learn is one type of activity—even one type of WAC program—while writing in the disciplines is another. Introducing the concept of writing to engage has allowed me to blur the boundaries, as suggested in Figure 2, between each of these approaches to designing writing activities and assignments. It has also allowed me to connect with faculty members who see fostering students’ ability to engage in critical thinking as one of their most important instructional objectives. By aligning writing activities and assignments to the critical thinking skills they see as central to working with information, ideas, and arguments within their disciplines, my colleagues have been able to see new roles that can be played by writing in their courses.

Writing to engage also allows us to distinguish between the kinds of learning that occur as students are introduced to a discipline and the kinds of learning that take place as students become more deeply involved with the discipline. Many writing-to-learn activities and assignments are intended to help students remember and understand key concepts and processes. Writing-to-engage activities and assignments build on that foundation by helping students build stronger connections among the concepts and processes they’ve already begun to understand—that is, these activities and assignments are designed to help students gain greater control over the information, ideas, arguments, frameworks, and processes that are central to the discipline. In this sense, by asking students to draw on critical thinking skills such as reflecting, applying, and analyzing as they work on writing-to-engage activities and assignments, we are engaging them in work that Marlene Scardamalia and Carl Bereiter (1987) describe as knowledge transforming. This work, which Scardamalia and Bereiter describe as adapting knowledge for presentation to a particular audience, asks writers to work with—to transform and build connections among—knowledge they have already gained. In carrying out this process, writers not only come to know their knowledge more deeply but also build new connections among what they’ve learned.
As a concept, as a name for a particular set of writing activities and assignments, writing to engage helps us distinguish among writing activities and assignments that support students’ acquisition and understanding of knowledge central to a discipline, that lead students to work more deeply with that knowledge, and that prepare them to participate in disciplinary discourse. As a part of a larger conceptual framework for the design of writing activities and assignments in WAC courses, the use of this concept increases the nuance and precision with which we can discuss the relationship between writing and critical thinking as well as the role that writing can play in helping students advance in their disciplines and professions.

References


landmarks/langer-applebee/ (Originally published in 1987 by National Council of Teachers of English)


Defining the Activities in Bloom’s (Modified) Taxonomy of Cognitive Skills

The following activities use the modifications made by Anderson and Krathwohl (2001). I have added reflecting to Anderson and Krathwohl’s list.

**Remembering.** Committing information to memory so that it can be recalled later

**Understanding.** Working with information so that you can explain the who, what, when, where, how, and why associated with information and ideas

**Reflecting.** Considering the meaning and implications of information, ideas, and events

**Applying.** Using your understanding of information and ideas to explore a situation, problem, subject, or issue

**Analyzing.** Assessing the parts of a subject and assessing how those parts function as a whole and/or in relationship to other subjects

**Evaluating.** Making criterion-based judgments about a subject

**Creating.** Making something new
Keywords Associated with Activities in the Taxonomy

Use the following terms to signal particular cognitive activities, or look for these or similar words in an assignment to understand what the assignment is asking student to do.6

**Remembering.** Define, duplicate, learn, list, memorize, recall, repeat, reproduce, retain

**Understanding.** Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase, summarize, comprehend

**Reflecting.** Contemplate, consider, explore, indicate, muse, ponder, reveal, think about, wonder

**Applying.** Apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, solve, use, write

**Analyzing.** Analyze, appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test

**Evaluating.** Appraise, argue, assess, calculate, defend, evaluate, gauge, judge, select, support, value

**Creating.** Assemble, build, craft, conceive, construct, create, design, develop, fashion, formulate, generate, invent, write

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6. I have been unable to locate an original list of terms. Several exist on the web. This list extends work by others who have taken a similar approach to assessing the purpose of particular assignments. The list has also been modified to fit my revisions to the taxonomy.