

5

Writing to Learn

Origins of the Writing to Learn Approach

Writing to Learn is based on the observation that students' thought and understanding can grow and clarify through the process of writing. A saying attributed to E.M. Forster, "How can I know what I think until I see what I say" (Auden, 1962) captures the spirit of this approach and is widely cited by its adherents. This observation has been elaborated, researched, and made the heart of a pedagogy that focuses on personal, expressivist, journal, and other forms of exploratory writing.

James Britton and Janet Emig are primarily responsible for turning this observation into a pedagogical approach. In 1966, the Dartmouth Seminar brought together English language scholars from the United States and England and paved the way for a positive reception of the distinctly British model of language instruction put forth by Britton (1970) and Britton, et al. (1975). In contrast to the American emphasis on "disciplinary rigor, standard curricula, and standard 'objective' evaluation," (Russell, 1994, p. 11) Britton, et al. (1975) identified three functional types of writing: transactional, for communicating information; poetic, for creating beautiful objects; and expressive, for exploring and reflecting upon ideas. Important to the writing to learn movement is this last category, expressive writing, which he and his colleagues argued could play a cardinal role in learning at every developmental stage, in part because it resembled what Vygotsky had identified as "inner speech" (p. 39). By foregrounding the personal

and psychological utility of writing in learning settings (Britton, et al. 1975), and by emphasizing the powerful ways in which language organizes experience (Britton, 1970), Britton and his colleagues lent substantial credence to the idea that cross-curricular writing programs could enhance student learning.

Meanwhile, the process-over-product movement had begun with the publication of Janet Emig's (1971) landmark work, *The Composing Processes of Twelfth Graders*. By studying the think-aloud protocols of eight 12th-grade writers, Emig persuasively presented writing as a complex, recursive process worthy of being studied and taught in its own right. Equally important to the writing to learn movement was her 1977 landmark article, "Writing as a Mode of Learning," which stands as a sort of charter document for the writing to learn movement. Because writing is neurophysiologically integrative, connective, active, and available for immediate visual review, speculated Emig, it represents a unique form of learning that deserves increased experimental and theoretical attention.

By 1983, a noticeable body of literature had amassed, uniformly celebrating writing as a central learning process (see Humes, 1983, for a review of this research). Applebee (1984, p. 582) has summarized the results of this research corpus as follows:

1. Writing involves a variety of recursively operating subprocesses (e.g., planning, monitoring, drafting, revising, editing) rather than a linear sequence.
2. Writers differ in their uses of the processes.
3. The processes vary depending on the nature of the writing task.

Also following Emig (1971, 1977) were studies that focused on writing in more constrained environments. Notetaking, for example, was seen as a potentially telling research site at the intersection of writing and learning. Di Vesta and Gray (1972), Fisher and Harris (1973), Schultz and di Vesta (1972), Kulhavy, Dyer, and Silver (1975), and Applebee (1984, pp. 585–586) found that notetaking was a more effective study technique than reading or listening alone, although the results depended on the notetaking strategy adopted as well as on whether the notes were available for later review. These studies also suggested that notetaking was a more effective study technique than the traditional

study method of underlining. However, because the notetakers spent more time on task than the readers, listeners, and underliners, the question of whether the results were due to some special quality of writing or simply a function of time on task remained unexamined (see Bretzing & Kulhavy, 1979, for a notable exception).

More Recent Developments

In 1984, Newell, lamenting the lack of empirical backing for writing as a mode of learning, examined the effects of notetaking, short-answer responses, and essay writing on three measures of learning: recall, concept application, and gain in passage-specific knowledge. He found that essay writing enabled students to “produce a consistently more abstract set of associations for key concepts than did notetaking or answering study questions,” (p. 275) and provided a possible explanation for such a finding based on Emig’s notion of the connective nature of writing:

[A]nswering study questions required planning at a local level rather than at a global level. While answering study questions may require a great deal of planning, the writer can only consider information in isolated segments. Consequently, while a great deal of information is generated, it never gets integrated into a coherent text, and, in turn, into the students’ own thinking. Essay writing, on the other hand, requires that the writers, in the course of examining evidence and marshaling ideas, integrate elements of the prose passage into their knowledge of the topic rather than leaving the information in isolated bits. This integration may well explain why students’ understanding of concepts from the prose passage was significantly better after writing essays than after answering study questions. (Newell, 1984, p. 282)

Since time spent on task remained uncontrolled (Applebee, 1984, p. 587), however, questions remain, as with the studies on notetaking, whether we can rightfully attribute the statistically significant difference between interventions to anything other than the duration of exposure to the subject matter. However, it may also be that the notetaking and

writing tasks were useful devices to create sufficiently challenges to hold attention on the subject matter for a longer time.

Five years later, Newell teamed up with Winograd to re-examine Newell's (1984) data with two new constructs—"level of importance" and "quality of gist"—in mind. Besides confirming Newell's (1984) earlier findings, Newell and Winograd (1989) concluded that both short-answer responses and essay writing enabled students to "recall the overall organizing frames of the original passages more often than when they engaged in notetaking" and that the more holistic "recall of gist" was best facilitated by essay writing (p. 210).

Langer and Applebee (1987) offer a substantial contribution to the research on writing to learn through their book, *How Writing Shapes Thinking*. "What contribution, if any," ask Langer and Applebee (1987, p. 5), "does written language make to intellectual development?" Among their many conclusions are the following

1. Writing activities promote learning better than activities involving only studying or reading.
2. Different kinds of writing activities lead students to focus on different kinds of information.
3. In contrast to short-answer responses, which turn information into discrete small pieces, analytic writing promotes more complex and thoughtful inquiry but on a smaller amount of information. (Langer & Applebee 1987 pp. 135–136)

In other words, although writing promotes more focused, complex consideration of the subject matter, the volume of information learned is narrowed. Whereas summary writing and notetaking lead to comprehensive but superficial understandings of the subject matter, analytic writing, by promoting depth rather than breadth, inevitably neglects whatever information was not included in the construction of the essay. Accordingly, teachers need to be aware of the various consequences of the forms and contexts of writing they introduce in the classroom.

An accurate indication of the status and flavor of the writing to learn movement during the 1980s comes from *The Journal Book*, edited by Toby Fulwiler (1987a; see also Fulwiler, 1987b). Drawing from a vast cadre of language scholars, including Lev Vygotsky (1962), James Moffett (1968, 1981), Britton (1970), Britton et al. (1975), Emig (1971,

1977), and Peter Elbow (1973, 1982), the 48 authors of this anthology celebrate the role of journal writing in the learning lives of their students, in disciplines ranging from English, philosophy, art, and music to political science, history, chemistry, and physics. Although under-theorized, this collection stands as one of the most cited writing to learn resources among teachers of writing.

Nothing Begins with N, an anthology of 16 articles edited by Pat Belanoff, Peter Elbow, and Sheryl Fontaine (1991), provides a response to the lack of research and reflection on freewriting. Although the articles range considerably in topic and method, from James Pennebaker's experimental study of the effects of freewriting on the emotional states of writers to Sheridan Blau's investigation of the process of "invisible writing," many of the authors address in some way the possible connections between freewriting and thinking in both school and non-school settings.

To develop a more nuanced understanding of how journal writing might support learning, Susan Peck MacDonald and Charles Cooper (1992) studied the effects of prolonged dialogic (student-structured) and academic (teacher-structured) journal writing on the quality and sophistication of final-exam essays in a Chinese literature course. The students who kept academic journals outperformed the students who kept dialogic journals, as well as those who kept no journal, on the three measures of essay quality and sophistication considered. Those students who kept dialogic journals based on a more open ended prompt calling for personal response, in fact, performed more poorly than students who did no journal writing at all. This study is a cautionary tale for composition teachers who uncritically advocate dialogic journals across the curriculum: "If we grant that students have some stake in being able to see things as their professors see them," conclude MacDonald and Cooper (p. 154), "our research suggests that, left to their own devices, students may fail to perceive the issues [pertinent to the professor], perceive them in ways different from their professors, or remain at too low a level of abstraction."

Similar caution is also suggested by Ackerman's 1993 review of thirty-five studies of writing to learn activities. He found the results inconclusive because of poor research designs, mismatches between the writing activities and the measures of learning, and predispositions of the researchers of find positive affects. He found the evidence particularly uneven when it came to how the interpretive-meaning mak-

ing aspects of writing impacted traditional measures of memory recall. His conclusion is that there must be a better understanding of what kind of writing fosters what kind of learning. A general predisposition towards discovery writing as a general and unqualified good needs to be replaced with a more precise investigation of how specific kinds of activities support specific forms of learning.

Discipline Specific Approaches

In recent years, the writing to learn movement has continued to migrate from general approaches to discipline-specific studies of the relation between writing and learning (see Gardner & Fulwiler, 1998). Lamenting the writing skills of her computer science students, Janet Hartman (1989) incorporated five types of the microtheme, “an essay so short that it can be typed on a single five-by-eight inch note card,” into her data structures course as a way to encourage robust learning of data structures as well as to practice effective communication among peers. These activities included summarizing articles, generating and articulating theses based on data, and explaining the behavior of a novel algorithm to a peer, all of which, according to Hartman, challenged students to approach, learn, and explain the complexities of the subject matter in new and thought-provoking ways.

In biology, Robert Cannon (1990) incorporated personal journals into his courses on general microbiology, virology, and immunology as a way to improve his students’ writing skills as well as to encourage closer interaction with the class material through frequent free-form writing tasks. Although his WAC-based courses initially attracted significantly fewer students than his traditional courses, within a few years the course enrollments restabilized at normal levels, and his students were overwhelming positive about the journal writing experience, which enabled them to approach the material in their own way while providing assurance to Cannon that the students were, in fact, engaging the required texts. “More importantly,” notes Cannon, “I am convinced that students are learning more about Microbiology, Virology and Immunology, because they are spending more time thinking about the discipline through their writing” (p. 157). Another early use of journal writing within the engineering curriculum is recounted by Selfe & Arbabi (1983, 1986).

In physics, Audet, Hickman, and Dobrynina (1996) studied the effects of computerized journals, or “learning logs,” on advanced high-school students. Besides fostering a positive interpersonal environment that flattened the hierarchy of classroom authority, the learning logs highlighted and encouraged the negotiation of scientific sense-making as well as the co-construction of knowledge. Journals have also played a role in sociology: In *Sociology*, Frances Coker and Allen Scarborough (1990) introduced the “free write,” both open ended and focused, in their sociology courses as a way to generate discussion and create a sharing interpersonal environment. However, the journals were also used as repositories of thoughts, cognitive and affective responses to readings, as well as rough drafts of course papers. Coker, in particular, noted encouraging results: “Students are showing earlier a more marked sophistication in delving into classical sociological theory. They are more willing to risk making interpretations and receiving criticisms in class, are working more closely with the texts they read, and are more willing to challenge each other, the instructor, and the sources they read. Finally, they write more cleanly, more clearly, and more persuasively than previous students” (p. 219).

In nursing, Kathleen Cowles, Donna Strickland, and Beth Rodgers (2001) introduced journal writing as an effective invention technique to help students prepare for a personal nursing philosophy paper due at the end of the course. In previous years, professors were disappointed by the “brief and perfunctory” nature of the philosophies they received. So Cowles, Strickland, and Rodgers gave their students the last 10 minutes of each class to reflect on the week’s classroom and clinical experiences and to make notes about how these experiences might help them form their personal philosophies. The results were unanimously positive:

The outcome of this strategy was comparable to the results obtained in other courses in which WTL [writing to learn] strategies were used in that the evolving nursing philosophies were far superior to those written by other groups without this continuing experience. (Cowles, Strickland, & Rodgers 2001, p. 365)

Likewise, Angela Gillis (2001) found that journal writing helped nursing students at her institution articulate their own values and epistemological assumptions, thus enabling them to exert more conscious

control over their practices. Journal writing also provided students with an inexpensive, time-efficient process for integrating classroom and clinical experiences into a systematic whole. Gillis recommended the following guidelines for students “embarking on the journaling process”:

- Establish a clear statement of purpose for the use of journaling in your clinical learning experience that is mutually agreed on by you, the writer, and the reader.
- Begin the use of journal entries with your first clinical experience.
- Make regular journal entries so that the progress of your learning can be traced.
- Immediacy should be a guiding principle in your journaling. Record entries either concurrently with the learning experience or as soon as possible after completion of your clinical experience.
- A spiral notebook is the most useful tool to keep together a progressive record of your learning.
- Use a double-entry format with the left-column reserved for descriptive narrative and the right column designated for reflection and critical analysis...
- Maintain a section on personal learning objectives that you evaluate on a regular basis [. . .]
- Keep a section to record new questions or challenges that have emerged for you as a result of the clinical experience and the process of journal writing. (Gillis, 2001, p. 54)

In statistics, Sandra Sgoutas-Emch and Camille Johnson (1998) explored the relationship between journal writing and student anxiety toward statistics (for writing to learn in statistics see also Beins, 1993; Dunn, 1996). Encouraged by work on therapeutic writing by Pennebaker and Beall (1986) and Rabinor (1991), Sgoutas-Emch and Johnson (1998) conducted an experiment with 44 undergraduate students in two statistics classes in which they studied the effect of journal writing on students’ reported levels of anxiety surrounding statistics

course content. Although journal writing offered no indication of improvement in attitudes toward statistics itself, the authors did find a statistically significant decrease in anxiety toward the content among those who kept a journal. Journal writing, concluded Sgoutas-Emch and Johnson (1998), “may be an effective tool in curtailing feelings and responses to exams in statistics and possibly other related courses” (p. 49).

With the move toward discipline-specific writing studies has come increased interest in other genres, such as the experimental article, scientific biography, and the laboratory report, and how the genre-specific literate practices of various disciplines might shape the attendant cognitive processes of students (Keys, 1999; Kelly & Takao, 2002; Kelly & Bazerman, 2003). Last, Leona English (2001) has begun to raise ethical concerns about students being required to disclose and blend their professional and personal lives in the pages of mandatory journals, especially given the inadequate support services available in the typical university classroom. With mandatory journal writing also comes the increased responsibility of ensuring students’ rights to privacy and confidentiality, a responsibility that English suggests teachers take very seriously before implementing journal writing in the classroom.