

ANNOTATION AS AN INDEX TO CRITICAL WRITING

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The differences in the ability to write critical and analytical essays among students with individual annotation styles were investigated. Critical and analytical writing was determined by the writer's ability to respond to a text with logical and critical analysis and attention to its thematic argument. Annotation styles were determined by ways of annotating a text: critical inquiry as skillful and simple highlighting as verbatim. The results indicated that skillful annotators produced more critical and analytical writing samples than did verbatim annotators. Verbatim annotators recycled information rather than analyzing it. The findings are congruent with theories that promote explicit metacognitive skills and support the position that teaching tactics consonant with students' cultural backgrounds are more likely to succeed in fostering critical thinking reflected in writing.

Keywords: *annotation; double-entry journal; efficacy expectation; marginal commentary; reading strategies; teacher role; cognition*

Although theoretical approaches to learning can be traced as far back as the work of Descartes, significant experimental studies that signaled the birth of the professional inquiry into learning began only a little more than a century ago. Since that time, from Skinner's behaviorism to experientialism and constructivism, scholars have attempted to delve the essence of learning. Increasingly, knowledge is viewed as an elaborate system of processes rather

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than just a body of information. The most significant shift in focus occurred when the discipline moved from the study of changes in manifest behavior (behaviorism) to changes in mental states (constructivism). With this shift, the mind is no longer seen as a *tabula rasa*. “When we intend to stimulate and enhance a student’s learning, we cannot afford to forget that knowledge does not exist outside a person’s mind” (Fosnot, 1996, p. 5). A key to this study is to examine the crucial role an explicit metacognitive skill, namely annotation, plays in the learning and thinking process.

Writing, as the externalization and remaking of thinking (Applebee, 1984; Emig, 1977), reflects thinking processes and meaning making. However, inexperienced writers require considerable training and modeling to arrive at the stage of expressing their thoughts logically. Writing as a process takes careful planning, and repeated and orchestrated strategic activities are the first step. Simply implementing the writing-to-learn doctrine in the curriculum does not guarantee critical thinking and the idealized result of writing to learn. To maximize the learning outcome by reinforcing critical thinking, student writers must be made aware of effective strategies as the first step in the learning process.

Individual styles in annotation as a strategy are the primary concern of this research. Annotation as a means to help the reader understand the text better is by no means a new concept. It draws on centuries-old intellectual traditions of both West and East. It lies at the very heart of exegesis—the tradition of explaining and understanding texts, including not only scriptural explication in the West but the rich heritage of the colophon as an element of Eastern calligraphy and philosophy. A recent history of the phenomenon is expounded in H. J. Jackson’s (2001) *Marginalia: Readers Writing in Books*. In the book, Jackson offers a pioneering survey of the phenomenon of marginalia and offers a range of examples of both obscure and famous annotators of Western literature, including Pierre de Fermat, Samuel Taylor Coleridge, and Graham Greene, and marked-up copies of Boswell’s *Life of Johnson*. The Western aspect of the tradition goes back to medieval monasteries and the making of illuminated manuscripts. Take the Dutch manuscript of *Biblia Pauperum* (ca. 1395 to 1400; Marrow, Defoer, Korteweg, & Wustefeld, 1990) as an example. The color-coded text, the illustra-

tions, and the prolix commentary in cursive script in the final pages of the folio all point to the early practice of annotation as a tool to aid the reader in comprehension. The hermeneutic tradition of literary criticism is in large part based on this practice of marginal commentary. A similar functional approach to using annotation can be found in Chinese calligraphy dating back to as early as the Six Dynasties period (AD 220 to 589). That was the beginning of a long-held tradition among the Chinese literati to add comments and responses, known as colophons, to poetic, political, or philosophical texts rendered in calligraphy. The colophon as annotation eventually became a genre in its own right, and many calligraphic scrolls are prized for their colophons as much as for the primary texts. The Chinese term for colophon is *ti*, which may be translated literally as “to lift the pen in response,” a fitting description of what an active reader does when interacting with a written text.

Although annotation has not been widely used by teachers of writing as an independent tool to tap into the learners’ thinking process as a preparation for critical writing, modern versions of annotation are not unknown to readers and writers. In a recent exhibition at the New York Public Library, *Passion’s Discipline: The History of the Sonnet in the British Isles and America* (May 2, 2003 to August 2, 2003), manuscripts of poets and critics alike serve as inspiring examples of annotation as a vital phase of the creative process. The manuscripts reveal the responses of modern poets, including W. H. Auden and Sylvia Plath, to works of an earlier generation. In their marginal notes, one finds the germ of many new poems. As experienced readers and writers, we all find ourselves annotating as a habit. For many of us, it was a fundamental component of our study habits, particularly as undergraduates, when highlighting a textbook and penciling in our professor’s comments became a vital aspect of our preparation for examinations and term papers. However, inexperienced readers and writers who have not been exposed to rigorous study habits early on need to be taught how to implement this strategy. Reviewing a student’s annotated text conveniently offers a window through which a teacher may discern a learner’s thinking styles and find effective ways to facilitate each learner’s critical thinking process.

LEARNING STRATEGIES AND THE LEARNING OUTCOME

The study of learning strategies is ultimately aimed at understanding how to help students improve their ability to learn. We learn by thinking. To control and direct their cognitive processes successfully, learners must be equipped with strategies and understand when and how to use them effectively to achieve a qualitative learning outcome.

Learning strategies are behaviors intended to influence or manipulate cognitive processes. Highlighting the main idea, underlining a phrase or key word, diagrammatically noting a structural feature, and using a double-entry journal are some of the examples of learning strategies. Research studies demonstrate that one way to influence the manner in which students process new information and acquire skills is to instruct them in the use of learning strategies (Dansereau, 1988; Jones, 1988; Mayer, 1988; McKeachie, 1988). Although we recognize the importance of learning strategies, we also ought to be attuned to the learners' beliefs about themselves and strategies, namely, the affective aspects of the learner. Second, we also need to recognize that mastery of learning strategies takes time and that repeated direct and explicit instruction is crucial.

EFFICACY EXPECTATION AND THE LEARNING OUTCOME

Aside from acquiring and executing strategies, learners bring with them their own sense of their ability to handle a task, and this sense of ability has been addressed in self-efficacy theory (Bandura, 1997; McCombs & Pope, 1994; Palmer & Goetz, 1988; Schunk, 1983). "An efficacy expectation is the belief that one can successfully execute behaviors that produce desired outcomes" (Palmer & Goetz, 1988, p. 50). Self-efficacy expectations or learners' perceptions of their own achievement attributes may affect strategy use. Those who find that a certain strategy requires a great deal of time and those who encounter difficulties may fail to apply these strategies during their learning process. Others who perceive the task as easy may also abandon their strategy. During my year-long observation for the current study, I have had instances of both the low- and high-efficacy expectations. One student I approached

when I noticed that she had done little annotation in the assigned reading told me that she did not know how to annotate because she did not know what to pay attention to in the text. Another student who exhibited a similar outcome expressed dismay about her weak analytical skills and said that she believed the text was very simple and did not need annotation to help her with her writing assignment. Both low- and high-efficacy expectations can result in metacognitive deficit, which, in the current study, has been identified as a major reason for the lack of strategy use. As Palmer and Goetz (1988) note,

Strategy use . . . is affected by knowledge structure, strategy knowledge, and motivational factors. Academically capable learners appear to have more knowledge regarding, and make more use of, learning and study strategies than do their less able peers. The effective readers and studiers are more flexible and adaptive in their use of strategies and more aware of the variables that influence the appropriateness of specific strategies. Less able learners may be less likely to monitor and regulate the comprehension process, and more prone to emotional responses that interfere with learning. When faced with comprehension difficulties, less proficient learners may be more inclined to react affectively than effectively. (p. 53)

In light of the above strategy application theory, an early and timely diagnosis of such a deficit is crucial in helping the learner to adjust his or her self-perception of adequacies and to effectively apply learning strategies.

SURFACE AND DEEP APPROACHES

Just as efficacy theory indicates that a learner's self-evaluation influences his or her strategy application, so does a learner's approach to strategy application manifest his or her level of cognitive engagement. Lavelle and Zuercher (2001) observe that the level of reader engagement varies depending on the reader's goal:

When the student's goal is just to comply with task demands, the learning activity involves a low level of cognitive engagement (e.g. memorizing or repetition) and a superficial, linear outcome (listing or organizing), a surface approach. On the other hand, when the

intention is to fully engage the task based on a need to know, the focus is at a higher conceptual level, geared toward manipulating layers of meaning, a deep approach. (pp. 374-375)

Levin (1982) expounds similar notions in his study of learning devices. His grouping of strategy styles corresponds with that of Lavelle and Zuercher: memory directed and comprehension directed. Memory-directed strategy style concerns mainly the storage and retrieval of information, which Schmeck (1988) labels as shallow learning style. Conversely, comprehension-directed strategy style calls for the understanding of meanings and their interrelatedness, which in turn is called deep learning style.

Drawing on the theory of deep versus surface approaches and learning styles, I analyzed students' annotation styles of two short reading assignments and compared the quality and quantity of their annotations with the corresponding essays written in response to the reading materials in an attempt to answer the question, does annotation serve as an index to critical writing?

Believing that a metacognitive assessment of each student through question and answer would strengthen the link between weak writing and surface approach and between strong writing and deep approach, I asked students to respond to three questions designed to elicit metacognitive processes. In particular, I hypothesized that students adopting a deep approach to annotation would be more likely to produce an essay with critical understanding and analysis of the reading material. These students would also have a strong awareness of their own cognitive processes and what strategies to adopt for the task. On the contrary, surface approach and fuzzy awareness of metacognition would produce a weak learning outcome—in this case, a weak essay.

In this study, I attempted to examine the qualitative differences between individual learning strategies among students whose ability to write critical and analytical essays varied. Critical and analytical writing was determined by the writer's ability to respond to a text with logical and critical analysis and attention to its thematic argument. Learning strategies were determined by ways students annotated texts. It was assumed that learning strategies would influence cognitive processes and that explicit instruction of learn-

ing strategies would enhance the learning outcome. This assumption was based on theories proposed by researchers and experts in the field who argued that manipulation of learning strategies directly affected cognitive processes and the learning outcome (Dansereau, 1988; Jones, 1988; Mayer, 1988; McKeachie, 1988). By this assumption, skillful annotators should produce more critical and analytical writing samples than poor annotators do. I designed the following study to test the hypothesis.