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Using Writing to Promote Thinking

A Busy Professor's Guide to the Whole Book

In his now classic study of pedagogical strategies that make a difference, Richard Light (2001) examined the connection between writing and student engagement. "The results are stunning," he claims:

> The relationship between the amount of writing for a course and students' level of engagement—whether engagement is measured by time spent on the course, or the intellectual challenge it presents, or students' level of interest in it—is stronger than the relationship between students' engagement and any other course characteristic. (55)

More recent research, conducted jointly by the National Survey of Student Engagement (NSSE) and the Council of Writing Program Administrators (WPA), has shown that for promoting engagement and deep learning the number of writing assignments in a course may not be as important as the design of the writing assignments themselves (Anderson, Anson, Gonyea, and Paine, 2009). Good assignments, this research has shown, give students opportunities to receive early feedback on their work, encourage meaning-making, and clearly explain the instructor's expectations and purpose. (We discuss this research in depth in chapter 4.) The aim of this book is to give professors a wide range of options for bringing the benefits of engaged learning to students. Our premise, supported by an increasing body of research, is that good writing assignments (as well as other active learning tasks) evoke a high level of critical thinking, help students wrestle productively with a course's big questions, and teach disciplinary ways of seeing, knowing, and doing. They can also be designed to promote

self-reflection, leading to more integrated, personally meaningful learning. Moreover, the benefits do not accrue only to students. Professors who successfully integrate writing and other critical thinking activities into their courses often report a satisfying increase in their teaching pleasure: students are better prepared for class, discussions are richer, and student performance improves.

But the use of writing and critical thinking activities to promote learning does not happen through serendipity. Teachers must plan for it and foster it throughout the course. This chapter suggests a sequence of steps that teachers can take to integrate writing and critical thinking into their courses. It then addresses four negative beliefs that often discourage teachers from taking these steps—the beliefs that integrating writing into a course will take time away from content, that writing assignments are not appropriate for some disciplines or courses, that assigning writing will bury a teacher in paper grading, and that assigning writing requires specialized expertise. Because these beliefs raise important concerns, we seek to supply reassuring responses at the outset.

This chapter provides, in effect, a brief overview of the whole book; subsequent chapters treat in depth each of the suggestions or issues introduced briefly here.

Steps for Integrating Writing and Critical Thinking Activities into a Course

This section surveys seven steps teachers can take to integrate writing and critical thinking activities into a course.

Step 1: Become Familiar with Some of the General Principles Linking Writing to Learning and Critical Thinking

To appreciate how writing is linked to learning and critical thinking, we can begin with a brief discussion of how we might define critical thinking.

Critical Thinking Rooted in Problems

Although definitions in the pedagogical literature vary in detail, in their broad outlines they are largely elaborations, extensions, and refinements of the progressive views of John Dewey (1916), who rooted critical thinking in the students' engagement with a problem. Problems, for Dewey, evoke students' natural curiosity and stimulate learning and critical thought. "Only by wrestling with the conditions of the problem at first hand, seeking and finding [their] own way out, does [the student] think" (188).

Part of the difficulty of teaching critical thinking, therefore, is awakening students to the existence of problems all around them. Meyers (1986), who agrees with Dewey that problems are naturally motivating, argues that teachers ought to begin every class with "something that is a problem or a cause for wonder" (44). Meyers quotes philosopher and chemist Michael Polanyi,

who claims that "as far down the scale of life as worms and even perhaps amoebas, we meet a general alertness of animals, not directed towards any specific satisfaction, but merely exploring what is there: an urge to achieve intellectual control over the situations confronting [them]" (41).

Presenting students with problems, then, taps into something natural and self-fulfilling in our beings. In his fifteen-year study of what the best college professors do, Ken Bain (2004) shows that highly effective teachers confront students with "intriguing, beautiful, or important problems, authentic tasks that will challenge them to grapple with ideas, rethink their assumptions, and examine their mental models of reality" (18). Set at the appropriate level of difficulty, such "beautiful problems" create a "natural critical learning environment" that engages students as active and deep learners. Similarly, Brookfield (1987) claims that critical thinking is "a productive and positive" activity. "Critical thinkers are actively engaged with life" (5). This belief in the natural, healthy, and motivating pleasure of problems—and in the power of well-designed problems to awaken and stimulate the passive and unmotivated student—is one of the underlying premises of this book.

Disciplinary versus Generic Domains for Critical Thinking

Not all problems, however, are *academic* problems of the kind that we typically present to students in our classrooms or that we pose for ourselves in doing scholarly research. Academic problems are typically rooted within a disciplinary conversation: to a large extent, these problems are discipline-specific, because each discipline poses its own kinds of questions and conducts inquiries, uses data, and makes arguments in its own characteristic fashion. As Anne Beaufort (2007) has shown, to think and write like a disciplinary expert, students must draw not only on subject matter knowledge but also on knowledge about the discipline's genre conventions, its methods of argument, its typical kinds of evidence, its ways of referencing other researchers, and its typical rhetorical contexts and audiences. Chapters 3 and 4 develop strategies for helping students think rhetorically about their purpose, audience, genre, and discourse community. Chapter 10 addresses Beaufort's novice-expert schema in more detail by drawing on rhetorical understanding to teach undergraduate research.

Although academic problems typically have discipline-specific features, certain underlying aspects of critical thinking are generic across all domains. According to Brookfield (1987), two "central activities" define critical thinking: "identifying and challenging assumptions and exploring alternative ways of thinking and acting" (71). Joanne Kurfiss (1988) likewise believes that critical thinkers pose problems by questioning assumptions and aggressively seeking alternative views. For her, the prototypical academic problem is "ill-structured"; that is, it is an open-ended question that does not have a clear right answer and therefore must be responded to with a proposition justified by reasons and evidence. "In critical thinking," says Kurfiss, "all assumptions are open to question, divergent views are aggressively sought, and the inquiry is not biased in favor of a particular outcome" (2).

The Link between Writing and Critical Thinking

Given this view of critical thinking, what is its connection with writing? Quite simply, writing is a process of doing critical thinking and a product that communicates the results of critical thinking. As we show in chapter 2, writing instruction goes sour whenever writing is conceived primarily as a "communication skill" rather than as a process and product of critical thought. If writing is merely a communication skill, then we primarily ask of it, "Is the writing clear?" But if writing is critical thinking, we ask, "Is the writing interesting? Does it show a mind actively engaged with a problem? Does it bring something new to readers? Does it make an argument?" As chapters 2 and 3 explain, experienced writers begin by posing two kinds of problems—what we might call subject matter problems and rhetorical problems. Subject matter problems drive the writer's inquiry. The writer's thesis statement (or hypothesis to be tested in empirical research) is a tentative response to a subject matter problem; it poses a contestable "answer" or "solution" that must be supported with the kinds of reasons and evidence that are valued in the discipline. But writers also think critically about rhetorical problems: who is my audience? What genre should I employ and what are its features and conventions? How much do my readers already know about and care about my research question? How do I want to change my audience's views? What alternative views must I consider? Writers produce multiple drafts because the act of writing is itself an act of problem-solving. Behind the scenes of a finished product is a messy process of exploratory writing, conversation, and discarded drafts. Chapters 2 and 3 deal with these issues in depth.

Step 2: Design Your Course with Critical Thinking Objectives in Mind

Once teachers are convinced of the value of critical thinking, the next step is to design a course that nurtures it. What is such a course like? In her comprehensive review of the literature on critical thinking, Kurfiss (1988) examined a wide range of successful disciplinary courses devoted to the teaching of subject matter and critical thinking. In each case, she explains, "the professor establishes an agenda that includes learning to think about subject matter. Students are active, involved, consulting and arguing with each other, and responsible for their own learning" (88). From this review, she derives eight principles for designing a disciplinary course that supports critical thinking:

1. Critical thinking is a learnable skill; the instructor and peers are resources in developing critical thinking skills.
2. Problems, questions, or issues are the point of entry into the subject and a source of motivation for sustained inquiry.
3. Successful courses balance challenges to think critically with support tailored to students' developmental needs.

4. Courses are assignment centered rather than text and lecture centered. Goals, methods, and evaluation emphasize using content rather than simply acquiring it.
5. Students are required to formulate and justify their ideas in writing or other appropriate modes.
6. Students collaborate to learn and to stretch their thinking, for example, in pair problem solving and small-group work.
7. Several courses, particularly those that teach problem-solving skills, nurture students' metacognitive abilities.
8. The developmental needs of students are acknowledged and used as information in the design of the course. Teachers in these courses make standards explicit and then help students learn how to achieve them. (88–89)

This book aims to help teachers develop courses that follow these guidelines. Of key importance are Kurfiss's principles 2, 4, and 5: a good critical thinking course presents students with "problems, questions, [or] issues" that make a course "assignment centered rather than text [or] lecture centered" and holds students responsible for formulating and justifying their solutions orally or in writing. This book particularly emphasizes writing assignments because they are perhaps the most flexible and most intensive way to integrate critical thinking tasks into a course and because the writing process itself entails complex critical thinking. But much attention is also given to class discussions, small-group activities, and other teaching strategies that encourage students to work collaboratively to expand, develop, and deepen their thinking. Attention is also given throughout to the design of problems at appropriate levels of difficulty, to the developmental needs of students, and to the importance of making expectations and criteria clear (principles 1, 3, and 8).

Step 3: Design Critical Thinking Tasks for Students to Address

A crucial step in teaching critical thinking is to develop good problems for students to think about. Tasks can range from enduring disciplinary problems to narrowly specific questions about the significance of a graph or the interpretation of a key passage in a course reading. The kinds of questions you develop for students will depend on their level of expertise, their current degree of engagement with the subject matter, and the nature of question asking in your own discipline.

When we conduct workshops in writing across the curriculum, we like to emphasize a disciplinary, content-driven view of critical thinking. One of John's workshop strategies is to ask faculty to write out one or two final examination essay questions for one of their courses—questions that they think assess subject matter knowledge and a desired level of disciplinary or generic critical thinking. Participants then discuss the kinds of thinking

needed and possible ways to revise the questions to increase or decrease the level of complexity. Once participants have revised their questions, John suggests that it is a shame to waste them on an in-class exam, where students are graded on a hasty, unrevised rough draft. More learning might emerge if such questions were integrated into the fabric of a course, where the question could keep students longer on task, stimulating deepened and more complex thought, engagement, and disciplinary learning. Chapters 4, 5, 6, 8, and 9 focus specifically on the design of critical thinking tasks to serve as formal or informal writing assignments or as starting points for other critical thinking activities.

Step 4: Develop a Repertoire of Ways to Give Critical Thinking Tasks to Students and to Coach Critical Thinking

Once you have developed a stockpile of critical thinking problems based on your course's subject matter, you can choose from dozens of ways to integrate them into your course. This book presents numerous options for giving critical thinking problems to students. These include the following:

- *Problems as formal writing assignments*. Formal writing assignments, which require revision and multiple drafts, keep students on task for extended periods and are among our most powerful tools for teaching critical thinking. They can range in length from one-paragraph micr-othemes (see chapter 4) to major research projects within a disciplinary genre (see chapter 10). As these chapters show, effective academic assignments usually require that the student develop and explore a disciplinary problem or propose and support a thesis or test a hypothesis in response to a problem. Such problem-centered assignments, which are primarily argumentative or analytical, are more effective for developing critical thinking than topic-centered assignments, which students often interpret as asking for information ("Write a research paper on one of the following topics.").
- *Problems as thought-provokers for exploratory writing*. Although students usually write only a few formal papers for a course, they can do behind-the-scenes exploratory writing on a daily basis. Chapters 2 and 5 provide a rationale for this kind of low-stakes writing, which is a seedbed for generating and growing ideas. Exploratory writing records the actual process of critical thinking while simultaneously driving it forward. Perhaps more than any other instructional tool, exploratory writing transforms the way students study for a course because it can make active critical thinking about course subject matter part of each day's homework. Chapters 5 and 6 give numerous suggestions for integrating exploratory writing into a course, ranging from various kinds of journals or thinking pieces to postings on electronic discussion boards.

- *Problems as small-group tasks*. Disciplinary problems make powerful collaborative learning tasks. Small groups can be given a set time to brainstorm possible solutions to a problem or to seek a best solution by arriving at a consensus or a reasoned "agreement to disagree." In a plenary session, groups report their solutions and present their justifying arguments using appropriate reasons and evidence. The instructor usually critiques the groups' solutions and often explains how experts in the discipline (for whom the teacher is spokesperson) might tackle the same problem. During plenary sessions, the instructor models and coaches disciplinary ways of making arguments, also attending to the generic critical thinking skills of looking at the available evidence and considering alternative views. Chapter 8 focuses on the uses of small groups to promote critical thinking.
- *Problems as starters for class discussions*. Discussion classes can begin with one or two critical thinking problems written on the whiteboard or posted in advance on an electronic discussion board as questions of the day. The teacher guides the discussion, encouraging students to appreciate and manage complexity. (If students have addressed these questions the night before in an exploratory thinking piece, they will be more prepared for class discussion.) Other ways to get students actively addressing critical thinking problems include classroom debates, panel discussions, and fishbowls. See chapter 9 for suggestions on bringing more critical thinking into lectures and class discussions.

Besides giving students good problems to think about, teachers need to critique students' performances and to model the kinds of critical thinking they want students to develop. This book suggests numerous ways that teachers can coach critical thinking, including critiquing solutions developed by small groups, guiding class discussions to deepen complexity, inviting alternative points of view, writing comments on student drafts, holding conferences, sharing their own autobiographical accounts of their own thinking and writing processes, discussing strengths and weaknesses of sample papers, breaking long assignments into stages, and stressing revision and multiple drafts. An equally important aspect of coaching critical thinking is to provide a supportive, open classroom that values the worth and dignity of all students. When students actively use a course's new concepts, ideas, and information to address authentic problems, they engage course material on a deep level.

Step 5: Develop Strategies to Include Exploratory Writing, Talking, and Reflection in Your Courses

Good writing, we like to tell our students, often grows out of good talking—either talking with classmates or talking dialogically with oneself through

exploratory writing. A key observation among teachers of critical thinking is that students, when given a critical thinking problem, tend to reach closure too quickly. They do not suspend judgment, question assumptions, evaluate evidence, imagine alternative answers, play with data, enter into the spirit of opposing views, and just plain linger over questions. As a result, they often write truncated and underdeveloped papers. To deepen students' thinking, teachers need to build into their courses time, space, tools, and motivation for exploratory thinking. Closely connected to exploratory tasks are reflective tasks aimed at encouraging students to think metacognitively about their own thinking processes, to connect learning in one course to other courses or to their own lives, to transfer skills from one setting to another, and to integrate their learning. Chapters 5–10 suggest numerous ways to integrate exploratory writing, talking, and reflection into your courses. Specific strategies for teaching metacognition, reflection, and self-assessment are found in chapter 12.

Step 6: Develop Strategies for Teaching the Genres of Your Discipline and the Ways That These Genres Use Evidence to Support Claims

Instructors in disciplinary courses hope not only to improve their students' critical thinking skills but also to teach them to think like disciplinary experts (to think like historians, psychologists, biologists, business managers, or nurses). To move from novice to expert in a given field, students must learn the discipline's ways of thinking, talking, and writing—what rhetoricians call the field's discourse community. Teachers can accelerate students' understanding of a field by designing assignments that teach students to write within the discipline's typical genres, such as experimental reports, ethnographies, recommendation memos, nursing care plans, design proposals, or field-specific conference papers suitable for presentation at an undergraduate research conference.

In a prototype paper in many of these genres, the writer typically uses evidence from discipline-specific primary sources or data to add something new, surprising, or challenging to a conversation carried on within the discipline's secondary sources: "Some scholars have said *X* (literature review), but I am arguing *Y* (thesis to be supported by analysis of appropriate primary sources or data)."

What undergraduates particularly need to learn is how different disciplines use different kinds of primary data for evidence. According to Richard Light (2001), "A surprising number of undergraduates describe learning how to use evidence to resolve controversies in their field, whatever their field, as a break-through idea" (122). Light describes the bafflement of first-year students as they shift from discipline to discipline, encountering different ways that disciplines gather and use evidence to address problems. Some disciplines derive their evidence from aural, visual, or verbal texts housed in libraries, historical archives, newspapers, art galleries, museums, or cyberspace. Other disciplines use evidence from lab

or field research, often subjecting quantitative data to statistical analysis with results displayed in graphs or tables. Still other disciplines use qualitative data from observations of natural or cultural phenomena or from ethnographic notes, focus group transcripts, surveys, or interviews. Students need to see how these kinds of data serve as evidence to support an argument that joins a disciplinary conversation. Chapters 3 and 4, as well as chapter 10 on teaching undergraduate research, treat the use of disciplinary genres and evidence in more detail.

Step 7: When Assigning Formal Writing, Treat Writing as a Process

In many courses, the student artifact that most fully exhibits critical thinking is a formal paper requiring analysis and argument as opposed to algorithmic calculations. Too often, however, what students submit as finished products are often simply edited rough drafts—the result of an undeveloped and often truncated thinking process that doesn't adequately examine all the available evidence, consider alternative views, develop ideas fully, or imagine the needs of a new reader. Students often avoid or truncate the messy writing process through which undeveloped and initially confusing ideas become gradually focused, deepened, and clarified through successive drafts. No matter how much we emphasize global revision of early drafts, many of our students will continue to write their papers the night before they are due. The most powerful solution is for teachers to structure their courses to promote writing as a process. There are many strategies for promoting writing as process: incorporating exploratory writing into the course (in-class freewrites, out-of-class thinking pieces), breaking difficult assignments into scaffolded parts, teaching metacognitive skills for self-assessment and reflection, setting due dates for rough drafts, requiring peer review of drafts, scheduling paper conferences, and encouraging use of the campus's writing center. We should note especially that writing centers are effective at teaching students how to use the writing process for brainstorming, organizing, and developing ideas. Experienced tutors or consultants can help students understand the demands of an assignment, draw out initial ideas, overcome writer's block by encouraging imperfect first drafts, and help writers revise for clarity, complexity, and development. On many campuses the director of the writing center is one of an instructor's most important resources for developing ways to incorporate writing into a course. Chapters 11–16 offer many suggestions for encouraging students to deepen and extend their writing processes.

Four Discouraging Beliefs and Some Encouraging Responses

The steps just described can help teachers integrate writing and critical thinking activities into their courses. However, many teachers who are tempted to do so may be held back by negative beliefs or misconceptions

about what happens when a teacher begins developing a pedagogy using writing and critical thinking. It will be helpful, therefore, to address these beliefs at the outset. Based on discussions with faculty from across the disciplines, we find the following four misconceptions the most pervasive and potentially discouraging.

Misconception 1: Emphasizing Writing and Critical Thinking in My Courses Will Take Time Away from Content

Many faculty, understandably concerned about coverage of material, do not want to shift class time away from content. In addressing this conundrum, one must first distinguish between how much a teacher "covers" in a given course and how much students actually learn in a meaningful and usable way. Much of the literature on best pedagogical practices suggests that less is more. For example, Robert Zemsky (2009), founding director of the University of Pennsylvania's Institute for Research on Higher Education, argues that "no one has sufficient time or gray matter to master a knowledge base that is growing exponentially every decade or so." Rather than focus exhaustively on content coverage, Zemsky urges educators to prioritize content, focusing on high-priority material while simultaneously teaching the critical thinking and problem-solving skills needed to acquire and apply new knowledge:

> Discussions of the changing nature of knowledge often morph into what a successful learning outcome would be if detailed content were actually becoming less important than a well-executed learning process. The former is static; the latter is dynamic in the sense that learning processes change as the learner seeks new knowledge and tackles new problems.

In our experience, integrating writing and critical thinking components into a course can increase the amount of subject matter that students actually learn. This assertion may seem counterintuitive until one realizes that many kinds of short assignments—particularly short, formal assignments or low-stakes exploratory writing—can restructure the way students study outside of class. Critical thinking tasks—which require students to *use* their expanding knowledge of subject matter to address disciplinary problems—motivate better study habits by helping students see their learning as purposeful and interesting. If tasks are designed to improve academic reading (see chapter 7), students often learn to read textbooks and other course materials more powerfully and to interact more critically with primary source readings. With more confidence that students can learn from assigned readings, teachers can, if they choose, redirect some class time away from lecturing over the readings toward critical discussions, small-group problem-solving, or other critical thinking activities. The emphasis

throughout this book is on helping students learn the subject matter of a course at a deeper and more intellectually mature level.

Misconception 2: Writing Assignments Are Unsuitable in My Course

Most teachers believe that writing applies naturally to English courses, liberal arts courses, and certain specialized courses in their fields. They may not, however, believe that writing is equally appropriate in their own courses. These doubts are frequently expressed by teachers of quantitative or technical courses or ones that focus on basic facts, concepts, or algorithmic procedures that, according to the teacher, must be "committed to memory" before the student can move on to problem-solving and analysis. If we apply some conceptual blockbusting, however, we see that writing assignments can be used profitably in any course. (Our point is exemplified by the wide range of disciplines represented in this book—accounting, physics, chemistry, all levels of mathematics, nursing, business, education, and engineering, as well as the humanities and social sciences.) By conceptual blockbusting, we mean primarily rethinking what constitutes a *writing assignment*. Many of the assignments in this book are nongraded or are very short formal tasks designed to help students understand an important course concept. Others have a metacognitive aim—helping students reflect on their own thinking processes or productively altering their methods of studying or reading. Still others have a procedural aim—helping students learn disciplinary methods of inquiry and analysis. Whatever a teacher's goals for a course, writing assignments can be designed to help students meet them.

Misconception 3: Adding More Writing to My Course Will Bury Me in Paper Grading

Many teachers would gladly require more writing in their courses if it were not for the need to mark and grade all those papers. If teachers do not currently assign any writing in their courses, adding a writing component will admittedly require extra work, although not necessarily more total time devoted to teaching if some of the teacher's current preparation or conference time is shifted toward responding to writing. If teachers already require writing in their courses (say, a couple of essay exams and a term paper—assignments that often have low learning value for students), following the suggestions in this book might *reduce* the total time they spend on student writing while simultaneously making that time more rewarding for themselves and more productive for students. The NSSE/WPA research cited at the beginning of this chapter (Anderson, Anson, Gonyea, and Paine, 2009) has shown that what matters in using writing to promote deep learning is not the amount of writing in a course but the quality of the writing assignments themselves.

There are many ways to work writing into a course while keeping the paper load manageable. Some methods require no teacher time (for example, in-class freewriting); some, minimal time (perusing a random selection of posts on a class discussion board); and some, very modest time (assigning write-to-learn microthemes using models feedback). Even when you require several formal papers or a major research project, you may employ any number of time-saving strategies to reduce the paper load (see chapters 14–16). The key is to decide how much time you are willing to spend on student writing and then to plan your courses to include only what you can handle—always remembering that you do not have to read everything a student writes.

Misconception 4: I Am Not Knowledgeable Enough about Writing and Grammar to Help Students with Their Own Writing

Many teachers across the curriculum will admit that English was not their favorite subject. Although they produce competent professional writing in their own fields, they believe that because they struggle with their own writing and because they do not know grammatical terminology or composition theory, they lack the skills to help students. This book aims to allay these fears. Because the best teacher commentary focuses primarily on students' ideas and the strengths, weaknesses, or clarity of their arguments, no special terminology is needed. Teachers simply need to be honest readers, making comments such as these:

"I'm getting lost. How does this paragraph connect to the previous one?"

"Readers will need more evidence here."

"What about Petriono's research on this problem? Can you summarize and respond to her argument?"

"Excellent point!"

A main aspect of teaching writing, as chapter 2 argues, is to encourage students to revise their drafts, showing students how global revision reveals critical thinking at work. The more teachers can show students their own thinking processes as they move from an initial idea to a finished article, the more they can serve as role models for students. In short, your own experience as an academic writer and reader, combined with your expertise in how scholars in your field inquire and argue, should be all the background you need to help your students with their writing.

Conclusion: Engaging Your Students with the Ideas of Your Course

The steps suggested here for integrating writing and critical thinking assignments into a course can increase students' engagement with subject matter and improve the quality of their work. Moreover, these suggestions

do not call for rapid, complete makeovers of a course. It is possible to make changes in a course gradually—trying a few new activities at a time, looking for strategies and approaches that fit your discipline and subject matter—that work for your students and that accord with your own personality and teaching philosophy.

Some teachers make only minimal changes in their courses. We know of one teacher, a brilliant lecturer, who has changed nothing in his course except for adding a series of three microtheme options (students must choose any two) that he grades using models feedback (see chapter 14). Each microtheme assignment focuses on what he considers a threshold concept for his discipline. From each microtheme set, he selects examples of good responses as well as examples of different kinds of misunderstandings. In-class discussion of these samples lets him focus again on helping students understand the threshold concept. He is happy with this minimalist approach, which he thinks has improved student learning.

But we know of other teachers who have radically transformed their classrooms, moving from a teaching-centered to a learner-centered pedagogy, from lecture-based courses to active learning courses that use exploratory writing, collaborative learning, lively discussions, and other strategies for engaging students in inquiry and debate.

In the pages that follow, we invite readers to find what works for them and for their students.