

Rethinking the Writing Classroom: Meeting the Needs of Diverse Learners

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Abstract

The developmental writing classroom often brings together students with a broad range of differing learning needs, united mainly by their inability to meet the writing demands of college-level work. Addressing these heterogeneous needs represents a significant challenge to writing instructors. Although the broad integration of a writing-process paradigm into composition classrooms has meant that students in developmental writing courses generally receive far more useful and effective instruction than they would have twenty years ago, process-based instructional models often lack the multi-dimensionality required to address the whole range of needs that students may present. An effective framework for process instruction must incorporate clear assumptions about the nature and breadth of heterogeneous learning needs of students and address those needs through a comprehensive system that is flexible and that incorporates students' development of self-understanding and self-efficacy in strategy employment. Such an approach may reduce the challenge to instructors and serve the whole range of students better.

The typical developmental writing class brings together students who not only are unready for the first-year writing course but who also often differ from one another in fundamental ways. Within a single classroom there may be students whose secondary education left

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them unprepared for college writing, students for whom English is a second language, students with diagnosed or undiagnosed language-based learning disabilities, and students with diagnosed or undiagnosed disorders of attention. Even within each of these categories, there may be fundamental differences between students; for example, second-language learners from different first-language groups may have widely different learning needs, and students with learning disabilities by definition represent a broadly heterogeneous group. Furthermore, each of these categories may overlap. There is a high degree of comorbidity between attention disorders and learning disabilities; many underprepared students may have undiagnosed learning disorders; some second-language learners may also have learning disabilities, and so on.

Contemporary composition pedagogy has made significant strides in adapting to the challenge we describe here. Most college writing teachers use regular individual conferences, and seek to address the diversity of student needs through that vehicle. The widespread adoption of a process orientation in writing instruction in itself marks a fundamental improvement, in that process instruction, however defined and applied, necessarily attends to individual student needs in a way that a more formal, product-based approach does not. In learning to approach writing as a process, one that may involve a range of generating and organizing strategies at various moments in composing, most students will begin to develop their own individual approaches to writing. The widespread implementation of portfolio-based instruction and grading has also increased the individualization of instruction and enhanced the ability of instructors to meet student needs directly. Finally, the increasing role of writing centers on many college campuses has created a safety net for struggling writers that by its very nature is more individualized than the classroom can be.

Still, the mechanisms available within postsecondary institutions for responding to the individual needs of developmental writers are limited in scope and tend to be applied after the fact. In general, it is difficult for developmental writing classes to avoid offering a single model of instruction, pitched somewhere near the middle of the diverse range of students' abilities and needs, with needs and problems that fall outside of that middle range addressed mainly through individual conferences and writing center appointments. The argument of this chapter is that this situation can be improved by defining a framework for writing-process instruction that systematically addresses the diversity of students' learning profiles and needs for writing development within the classroom context itself, reducing the pressure on more individualized structures, and placing a greater focus on ways in which students can become active in the process of their learning. The framework suggested here was developed specifically to work with students with diagnosed learning disabilities and attention disorders, in a college program designed to work with students whose academic skills range from elementary grade levels to graduate levels. Although the site at which the approach to instruction we describe was developed is a specialized one, we would argue that the lessons learned from working with students at extreme ends of the spectrum of learning diversity have application for all students who learn differently and who require innovative teaching practices in order to succeed as writers. Specific teaching approaches may vary, depending on the needs of individual students,

but the framework proposed here is designed to be flexible, individualized, and inclusive of a broad range of learning styles and profiles.

The starting point for any system of instruction should be an understanding of the students who will join in it: what their profiles and characteristics are as learners, what their strengths are, and what their needs are. To begin at the point of student need requires that we have a way of understanding learning needs in all of the richness and complexity of the cognitive, linguistic, sociocultural, and affective factors that underlie them, rather than defining need simply by the production problems that manifest themselves superficially on tasks such as standardized tests or placement exams. In contemporary usage, the word “diversity” in academic settings is often limited to cultural, ethnic, social, economic, and racial contexts. These meanings are, of course, essential ones. But we argue that the term must be augmented to incorporate the diversity of learning styles and abilities, so that addressing a diverse group of students also means understanding how complex and different their range of abilities and needs as learners may be. Starting with a diversity model for learning abilities and needs, it is possible to outline a system for developmental writing instruction that defines frameworks for responding to individual differences among students, and that shapes itself around the basic premise that instruction must be flexible, individualized, comprehensive, and systematic, rather than pitched toward a mythical middle ground.

The approach to writing instruction defined here incorporates two interconnected components. It begins with the assumption that effective teaching must be based on an accurate understanding of the broad nature of a student’s underlying learning profile, including strengths as well as areas of need, rather than depending simply on a more superficial recognition of the specific problems that a student has had executing the requirements of a given assignment. To support this approach to assessing and understanding a student’s writing problems, a systematic framework that incorporates all of the elements involved in the site of writing is required. The framework suggested here is based on the premise that similar surface problems in student writing may arise from very different underlying factors, and that the only way to address surface problems—for example, with mechanics, grammar, organization, or completion of assignments—is to understand the nature of their cause and to focus instruction at that level.

In addition to suggesting a framework for understanding writing problems, we propose a system for instruction in the process of writing that enables teachers to respond flexibly and appropriately to the range of needs presented by their students. Such a system has several requirements. First, it must be based on an accurate description of writing as a human activity that involves affective, social, and linguistic elements as well as fundamental neurocognitive processing components such as attention or memory. For the writing process strategies we teach to have meaning, they must stem from and account for the rich and varied ways in which writing proceeds for individuals. For this to occur, we must start with the most accurate knowledge we possess of how writing works as a cognitive process. The prescriptive process model that we teach will have value primarily to the extent to which it is based on an accurate descriptive model. Our pedagogical approach assumes the validity of a primarily cognitivist orientation to understanding the nature of learning and of writing, while incorporating

theoretical work directed toward an understanding of the factors that differentiate “basic” or developmental writers from their more accomplished peers (e.g., Bartholomae, 1980, 1985, 1987; Berninger, 1994; Flower, 1989; Flower & Hayes, 1981; Horning, 1987; Levine, 1987, 1996; Meltzer, 1993; Rose, 1983, 1984.)

Second, specific process strategies must be taught explicitly, with support for practice and adaptation among individual students, and the specific strategies that are taught should be situated within explicit instruction in the concept and description of writing as a cognitive process. To the extent possible, students should learn about the nature of writing as a process, and understand that the specific strategies that we suggest or assign, such as brainstorming, free-writing, and outlining, are not ends in themselves, nor even necessarily useful to a given individual, but rather attempt to make explicit and systematic the sorts of generating and organizing strategies that effective writers often perform in less explicit and more intuitive ways. Ideally, students should encounter a rich, extensive range of possible approaches to writing as a process, and engage in a process of testing out what works for them, and how various specific strategies may work together.

Third, students who have not acquired knowledge and use of the forms and conventions of written language must be given an opportunity to do so, but this teaching-learning process should occur within the context of a process-based approach, rather than be dealt with separately or in a way that makes such formal learning seem external and valueless. Instruction in aspects of writing such as grammar, mechanics, and patterns of development should take place within a context that gives those activities context and meaning; and even more important, such learning will be most effective if it is situated within direct instruction and practice in the ways in which it may be applied in the process of composing.

Finally, the value of explicit instruction in process strategies will depend primarily on how closely students collaborate in the development of a personal, individualized approach to composing. This requires a role for the instructor that is more coach than judge, and asks students to reflect on and assess the value of specific strategies in relation to their own self-perceived needs. The central role that the development of reflection, metacognition, and self-efficacy plays in successful student outcomes cannot be overstated. The goal of the approach described here is first that students come to understand their difficulties (and strengths) as writers, and second that they develop an approach to composing that responds directly to those difficulties and strengths. For this to occur, teachers must build into the course of their classes a reflective, metacognitive component that is integral at every step of the way.

The remainder of this chapter will discuss these elements in turn, beginning by describing and illustrating a framework that can help instructors recognize and understand the factors that underlie individual students’ writing difficulties, and then discussing an approach to writing-process instruction that incorporates the four aspects noted above.

A Framework for Understanding Writing Problems

In developing an approach to informal educational assessment of writing abilities, there are a number of factors to take into account. These factors are laid out in Figure 1.

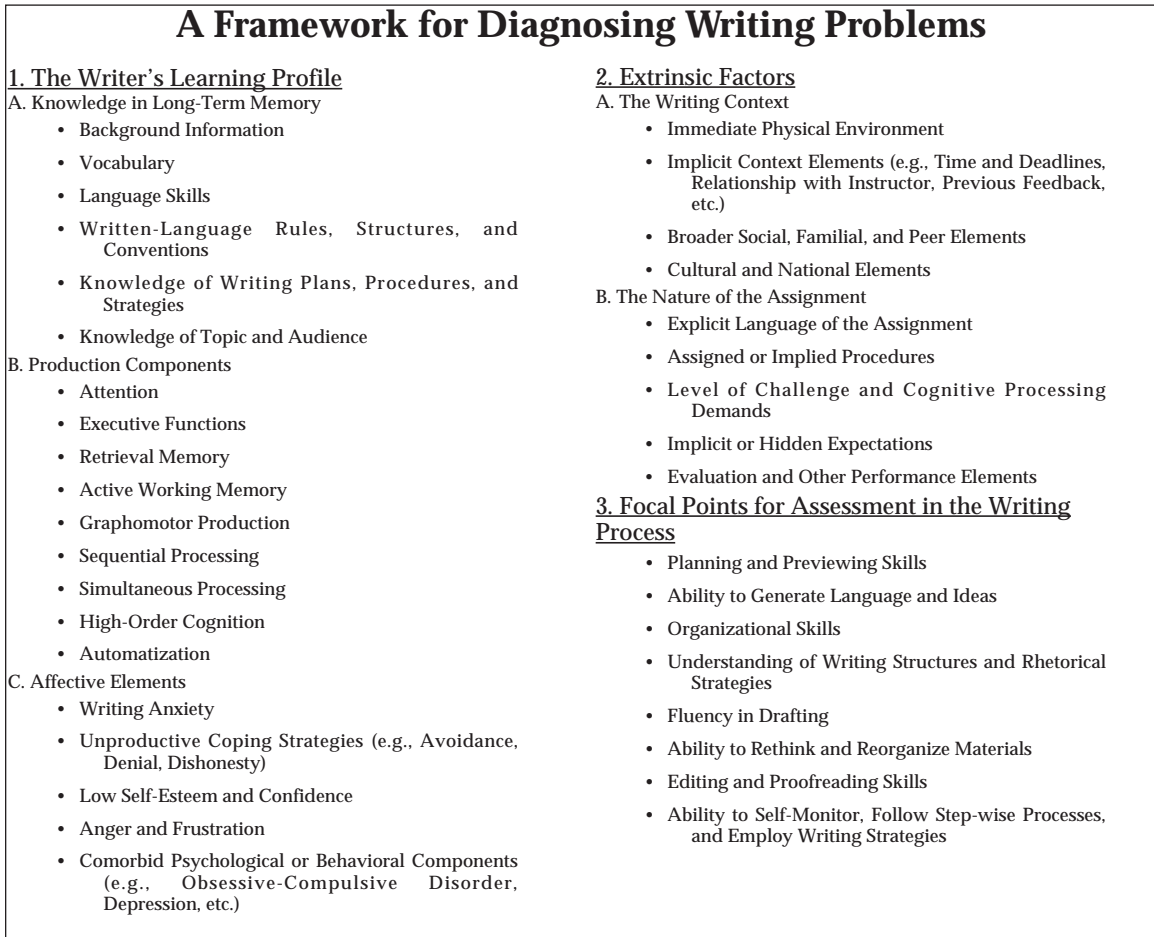


Figure 1. A framework for teacher-based assessment and informal diagnosis of writing problems, incorporating all of the major components that may be factors influencing writing production.

This model or framework for educational assessment of writing problems draws from the Flower and Hayes (1981) cognitive model of the writing process and Levine's (1987, 1996) interactive developmental paradigm for learning disorders. It provides a way of looking at the individual within his or her social context, and incorporates both cognitive and affective elements. Although the cognitivist approach has been critiqued from both humanistic and social

constructivist perspectives, arguably it continues to provide the clearest model of how writing works as a human activity. Pemberton (1993) provides an interesting discussion of this point. Without some sort of descriptive model of the process of writing, it is difficult or impossible to develop a purposeful approach to instruction in writing skills and strategies. Unless the strategies we teach are based on accurate approximations of how human cognition operates to process information, they are unlikely to succeed, and may even be counter-productive.

The framework for assessment defined here embeds the cognitive process model as the locus for assessment, and defines several major elements within the situation of writing as feeding into that cognitive process. Foremost among these is the writer him or herself, whose “learning profile” includes the neurocognitive constructs involved in information processing, affective components, and information and knowledge stored in long-term memory. Additionally, the task environment, which incorporates both the immediate context and other sociocultural spheres of context, must be taken into account, as much the task itself, both in the way it is explicitly defined, and in implicit elements. Finally, the writing product itself, as it accretes, feeds back into the process of writing.

This framework was defined in order to better address the writing needs of students with language-based learning disabilities and disorders of attention. However, if one sets aside these labels, and considers instead an approach to understanding learning difficulties that focuses on individual variations that operate within specific educational contexts, the framework may be useful for working with any student. It is not meant to imply that teachers necessarily have clinical knowledge of such elements as attention or memory; rather, that in working with diverse learners, it is essential to begin with the broadest and most accurate sense of all of the categories that diversity may encompass.

The goal here is to define a way of thinking about writing problems that moves beneath the surface of the problem, which is generally situated in the written product itself, to look at underlying factors, whether intrinsic to the writer or external, and how these shape the process of composing and its outcome. By embedding a descriptive model of the composing process into this framework, it is also possible to begin considering how intrinsic or extrinsic factors may shape, either negatively or positively, sub-processes within composing. For example, an anxiety-provoking task environment, such as a testing context, may severely limit a writer’s ability to generate information, and result in an essay that is over-structured and empty of content. If the student also has difficulties with attention and focus that make him or her more susceptible to anxiety in test contexts, the problem will be exacerbated. Understanding how these factors may interact to produce a specific type and level of writing performance is the whole point of the approach we have outlined here. Once these factors are understood, a much richer, more directed form of instruction, one focused on developing specific strategies and skills to compensate for areas of weakness, can begin.

A few examples may serve to illustrate. The first has to do with the way in which the immediate task environment may have a profound effect on writing performance. The two samples in Figure 2 were produced by the same student, within about a month of each other. The

student, 18 years old, had been diagnosed with dyslexia at age eight. He tested at roughly a 4th to 5th grade level on standardized tests of reading and spelling; on cognitive measures, he demonstrated low average abilities on verbal tasks, and superior abilities on non-verbal tasks. Both writing samples display obvious difficulties with the forms and structures of written language. Sample A, however, also shows severe constraints in the production of language, a relatively limited vocabulary, a relative degree of caution in syntax, and on the whole, a brief,

Sample A:

My mother is a round five foot two around one hundred and ten pound she has funny colored hair, I think she has green eyes. she has many quality like be the mother of me! and my sister? but seriously she is tuff, stands up for her self, know want her want in life, and is selfmotivated these are just some of her many qualities

Sample B:

In the years that I have attended Public Schools I have had a lot of ups and downs do to the way some teachers to class, conflick of interest between teacher and I, my adature problem in junior High and the weeks I missed in my junior year because of health problems, my parents divorce, my best friends dieing in your senior year were some of the contributing factors in the ups and downs in my education but intill I think in should have had better grades and I better adature about learning by my grades have steadily got-

Figure 2. Two writing samples produced by an adult male student with dyslexia. Sample A was produced in a timed testing context during admissions testing. Sample B was produced at home as part of a college application essay.

shallow approach to the topic, given that it is the entire essay. Sample B, which is the first paragraph of three, seems by contrast like a torrent of language, has absolutely no caution regarding syntax or mechanics, but uses a richer vocabulary and expresses a great depth of feeling. Looking at the two samples, it is difficult to imagine that they were produced by the same writer. What accounts for the difference? In this case, it is the task environment and task definition. The first sample was produced in an admissions testing context at the college to which the student had applied. He was furnished the prompt by a specific individual, who handed him a pencil and piece of lined paper and had him write for fifteen minutes or so in a small, sparsely furnished testing room. The prompt itself asked the student to describe someone or something that had personal significance for him, focusing the writer away from himself to at least some degree. The second sample, which was written as part of the writer's college application describing his past educational experiences, was produced at home, for an unknown audience ("the admissions department.") There was no sense of time constraint, and the prompt asked the student to speak about himself in an open-ended way. Out of these differences came two writing products that fundamentally differ from each other. If one were to use either sample in isolation from the other in order to define where instruction should begin, or what the student's main needs were in terms of process strategies, one would risk developing a partial or even inappropriate approach.

A second example, provided in Figure 3, may illustrate this point more fully. In this brief essay, written in response to a placement test prompt in a structured and timed context, the writer alternates between poorly organized or syntactically problematic sentences, and fairly eloquent statements. Some of the errors seem nearly inexplicable. The overall idea of the essay, the author's conclusion regarding flag-burning, seems confused and contradictory.

Simply focusing on the product and its surface errors and problems might lead one to conclude that the student needs to work on sentence skills and mechanics, along with

The purpose of public flag burning should be legal if done with a purpose and not out of malice. We do not live under a dictatorship, we have democracy, a people government; by the people, for the people. The framers of the constitution gave us a wide definition of the freedom of expression. Flag burning is a dramatic utencil for crowd persuasion. When a flag is burned people become very emotional and it then relieves the stress the problem originally creates. People feel as if they have gotten one step forward in getting what they want from govt. For me the burning of a flag contradicts the morals, in my eyes, it stands for; freedom, democracy, power and sucess. If a burning is for protest, to help get a point across I believe it is a given right to do.

Figure 3. A writing sample produced by an adult female student with an attention disorder. The sample was produced in a placement testing situation, with a one-hour time limit.

developing reasoning skills. But if one takes into account the student's underlying processing difficulties in the areas of attention and memory, the assessment of the product changes, and the orientation for instruction must be redefined. For example, the confusing first sentence ("The purpose of public flag-burning should be legal if done with a purpose...") becomes much easier to understand when one takes into account the difficulties with impulsivity, previewing and planning, and self-monitoring that are associated with Attention Deficit Hyperactivity Disorder (ADHD). Likewise, the great variability in the quality of sentences may reflect these issues as well as difficulties with tempo regulation; and the deterioration of the quality of the writing over the course of the paragraph may be read as a sign of the fatigue associated with sustained mental effort. Far from being a student with problems with language and reasoning abilities, this writer possessed superior abilities in each area. We would argue that even in this brief, chaotic essay indications of these abilities are embedded, not only in some of the better sentences but in the underlying thesis of the paragraph as well. (A sympathetic reading might run something like this: "Flag-burning should be legal if done with a purpose and not simply to incite violence; however, there is an irony embedded in such uses of flag-burning, in that one is burning the symbol of the very set of laws and social compacts that makes such extreme forms of speech legal. I personally do not see this as a meaningful or useful form of protest.") This fairly subtle argument, especially for a first-year college student, barely surfaces in the essay—but not because the student lacks this depth of reasoning or the language to express herself. Rather, difficulties with attention and memory present significant impediments to the process of writing, and the student lacks strategies to compensate.

Many teachers do not receive clinical information on students, nor do many students have this information. Still, there is a great deal that instructors can do to enrich the quality of their

understanding of students' needs, and to enlist students' own self-understanding in that service. First, it is essential to begin with some sort of systematic framework for investigating and understanding a student's strengths and needs. We have proposed such a framework here. Second, it is important for teachers to develop and expand their understanding of how various categories or elements within that framework may manifest themselves in the act of writing itself and in other learning contexts. This means becoming familiar with the ways in which learning disabilities, underpreparedness, second-language backgrounds, attention disorders, and other impediments may display themselves in various contexts, both in terms of their similarities and their differences.

A third key element in taking a diagnostic approach to teaching involves the way in which teachers look at the act of writing and the written product itself. Finding opportunities to observe students actually writing, in a variety of tasks, may provide important information. Even more essential, teachers must read students' writing from a hypothesis-building approach, assessing errors and problems for the factors that may potentially underlie them, and then basing instruction on those hypotheses as a way of testing and refining them. The work of informal diagnostic assessment should be ongoing and continuous, and to support this work it is essential that students perform a variety of writing tasks in different contexts. Sifting through the variations in performance on different writing assignments will be particularly useful if one begins with a sense of how task definition and task environment contribute to and shape writing performance.

Finally, and most important, the student must be engaged in this process of understanding and self-understanding. Student self-reports often provide the richest and most useful information teachers can have to guide instruction, yet it is relatively uncommon to actually ask students to talk about their strengths and weaknesses as writers, their goals, or about the difficulties they encountered in responding to a writing assignment. Means for obtaining this type of information can be quite simple. Students can fill out an information sheet at the beginning of the semester that describes their interests, goals, strengths and areas to develop, which in turn can be used as the basis for discussion at an initial goal-setting conference. For each formal writing assignment, students can fill out both a previewing or planning sheet, which provides an indication of how they will approach the task, and then after the assignment is done write a brief analysis of the process they used and the difficulties they experienced in writing the paper. A course focused comprehensively on the development of metacognition might incorporate having students write a self-analysis of themselves as writers at both the beginning and the end of the semester.

More than anything, the system proposed here has to do with how the instructor defines his or her role. Specific expertise in areas such as second-language instruction or learning disorders cannot be expected of every writing instructor, although a working knowledge of such categories and the issues associated with them is certainly desirable. What can be expected is an approach to teaching that sets aside evaluation and judgment in favor of assessment and coaching, that is hypothesis-driven and collaborative, and that takes as its starting premise the rich range of individual variations across the diversity of students' learning needs.

A Framework for Process-Based Instruction

We suggest that there are two primary modes for writing instruction, which link back to the division between processing and long-term memory components within the writer's learning profile. As teachers, we can provide instruction in the forms, rules, structures, and conventions of written language (including those conventions peculiar to specific types of written discourse), or we can provide procedural strategies for writing, such as invention heuristics, organizing strategies, and the like. These two possible modes are sometimes characterized as being in opposition to each other, and even stereotyped as conflicting philosophies of instruction (e.g., the stereotype of the grammar drill-based remedial writing class versus the stereotype of the expressivist classroom in which no error is ever noted.) The prevailing paradigm in composition is clearly a process-oriented one, although in practice, most teachers employ elements of each mode of instruction, with emphasis and actual methods varying widely.

The question of how instruction in forms, structures, and rules should be balanced against instruction in process strategies and direct engagement with writing tasks is a complicated one, especially in a context in which a diverse group of students presents widely varying abilities and needs. We suggest an approach that assumes that linguistic knowledge and information about writing contained in long-term memory and deployed either consciously or automatically will have a significant influence on how the process of composing works for an individual. If that knowledge and information is extensive and largely automatic, it will provide powerful support for effective writing; if it is thin and mainly accessed through conscious recall, it will provide little support. Furthermore, long-term memory and processing components to some degree are inversely related. Strengths in one area (e.g., extensive background knowledge) can help compensate for weaknesses in the other (e.g., poor attention). Likewise, weakness in one area (e.g., poor retrieval memory) may undermine strength in another (e.g., adequate or strong receptive vocabulary). To give a broader example, if a student's knowledge of simple mechanics is partial and not automatic, then the attention he or she must pay to the relatively low-order task of punctuation will prevent or impede the necessary focus on higher-order concerns such as concept formation, sequential ideation, and coherence. For such a student, the choice may appear to be between a surface correctness that displays very little of his or her actual depth of thought, or an attempt to capture the quality of thought that forces correctness aside. The two writing samples in Figure 2 represent an extreme example of these two options, in the case of a student with very limited automatic memory for writing structures and rules. Likewise, a student who possesses strong linguistic knowledge but who has difficulties with attention and memory may appear to have difficulties with mechanics and grammar, when in fact the surface errors produced arise instead from an inability to attend to both high-order and low-order demands during the process of composing. This seems to be the case for the student who produced the writing in Figure 3.

Based on this premise, our suggestion is that any instruction in rules, forms, and structures should be situated within the broader context of a process-strategy orientation. Furthermore, in the scarcity of time that operates in every composition classroom, the focus on rules and

structures should be limited to only those elements that will have the widest and most powerful application, so that adequate attention can be paid to procedural strategies and writing in context. It is true that in an ideal world students whose knowledge of mechanics, grammar, and organizational structures is limited and not automatic would receive the instruction that they need. But to be effective, such instruction must necessarily be time-intensive and highly individualized, and it is a rare writing program that is able to provide the class size and depth of teacher-student contact required. And in most cases it may not be necessary. Furthermore, for students whose first language is not English, the development of basic second-language competence is a necessary precursor, and such students are unlikely to make significant progress in writing unless they are also progressing in their spoken command of English. The question of how best to address these students falls outside the scope of this chapter.

We suggest that the most powerful approach to writing difficulties is through the development of procedural strategies that are directly linked to the specific strengths and areas of need of the individual student. As we have argued above, such an approach is strongest when based on an accurate understanding of the specific needs of the individual student. However, even when this understanding is lacking or only partial, an overall process approach can be highly effective.

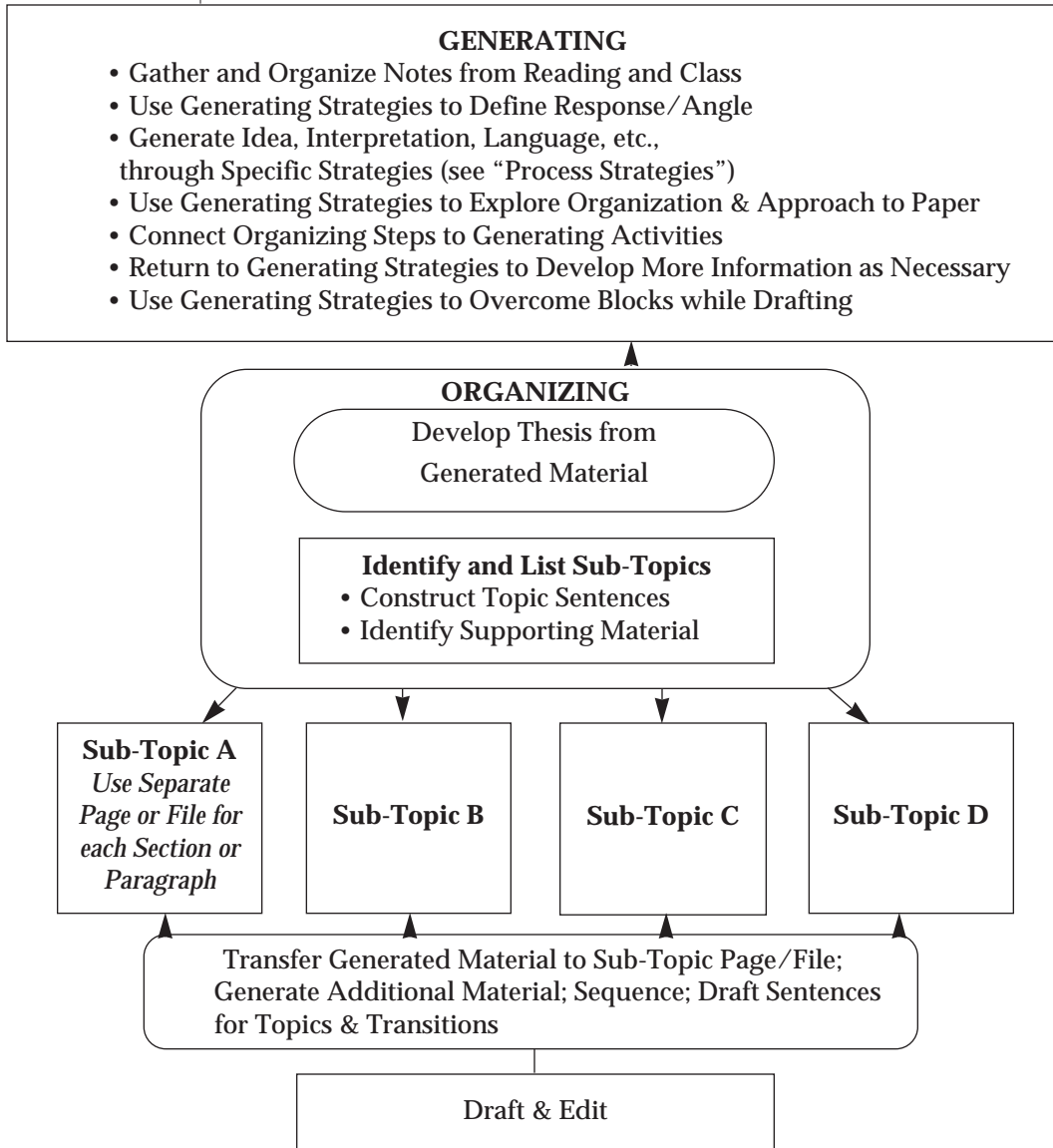
Such an approach includes four key elements, which we will address in turn. First, the prescriptive or teaching model of the process of writing is based on an accurate descriptive model. Second, process strategies are taught explicitly and made part of the course objectives and the evaluation criteria for grading. Third, students collaborate with the instructor in developing an individual approach to composing that best matches their own needs. Finally, students practice self-reflection and develop a metacognitive understanding as part of the course design.

The Prescriptive Model

For a teaching approach based on procedural strategy development and employment to be most powerful, it must be situated within an overall teaching model for writing as a process that is consistent with how writing actually works as a cognitive activity. For example, a model of process instruction that suggests that writers begin with invention strategies such as brainstorming and free-writing, then proceed to organize and arrange their ideas in outline form, then write a draft, and then revise, is only slightly more useful than the current traditional stereotype of think, outline, write, revise. Here again, we follow the cognitive process model, particularly in its emphasis on writing as a recursive process in which any given element may interrupt and supersede another element. That means we need a model for the composing process that is not sequential or linear, but builds the potential for recursiveness explicitly into instruction. Likewise, the Flower and Hayes model (1981) posits elements such as goal-setting, planning, and self-monitoring, that are not generally taught explicitly in standard process textbooks, and it also implies an approach to “revising” that situates the work of review and revision within the process as a whole, rather than an element that is applied only at the end.

- PLANNING**
- Preview Assignment
 - Define Outcome
 - Plan Steps and Sequence
 - Schedule Work Plan

Figure 4. A flow-chart for the process of writing that defines specific prescriptive strategies within the major activities involved in writing, including built-in structures designed to prompt self-monitoring and a recursive approach to writing as a process.



The flowchart provided in Figure 4 is a schematic representation of a prescriptive approach to writing as a process that can be used to provide an overall framework for more specific individual instruction. The flow-chart defines the major activities involved in writing, and offers guidelines within each activity, rather than specific lists of strategies, which are furnished to students separately. Although it is organized in a sequence that begins with planning and ends with editing, the actual sequence of work can flow in either direction. The core of the model is the assumption that planning, generating, and organizing are the key areas of focus for students, and that if they use appropriate strategies within these activities, then the acts of drafting and editing will be far less cognitively burdened, and more effective. The model also assumes that revision per se, as the act of re-seeing and re-thinking the paper as a whole, needs to be part of the process from the beginning, and that by the time an actual draft is completed, the primary remaining task should be editing rather than restructuring or rewriting. Furthermore, generating and organizing operate in a closely linked fashion, with the writer moving back and forth between the two, developing organizational structures out of the material he or she has generated, while using the categories and questions defined by the organizational framework as heuristics for further invention.

This relationship between generating and organizing is underscored and made explicit in the suggestion that students use the sub-topics or categories of their paper as the headings for separate files or sheets of paper into which they cut and paste or write the information, ideas, and language that they have generated. Although students need not necessarily follow this step literally, it is highly effective for writers who tend to be very disorganized, or who tend to produce papers that are underdeveloped. The sub-topics act as a sorting mechanism for ideas and language, and the amount of information gathered under a sub-topic acts as a visible cue, either that there is too much information, and the sub-topic needs to be further divided, or that there is too little, and the writer needs to return to generating. The overall goal of the model as a whole, and particularly of this aspect of it, is to enable the writer to arrive at the stage of actually producing a draft with as much of the material of the paper already on paper, and organized, as possible, in order to reduce the cognitive load in drafting and to allow for a focus on such issues as style and expression.

To this model, we attach a schematic for standard deductive essay structure, in essence a more elaborated and flexible version of the often criticized five-paragraph essay. This schematic provides students with one basic option for organization that can be directly linked to organizing activities within the process model. Although providing and teaching such a structure can potentially be limiting and deadening to invention, having ready access to a flexible, reusable plan for writing for many students liberates them from relatively low-order organizational concerns, so that they can focus on concept development. It is also a way to demystify the nature of an essay. To explain to a student that a five-page paper can essentially be broken down into six or seven paragraphs of about five to eight sentences each may transform an insurmountable task to one that seems possible.

Explicit Instruction in Process Strategies

With the process template as a starting point, we suggest that the early stages of a class focus on explicit instruction in process strategies. The goal here is to allow all of the students in the class to encounter a range of possible strategies for planning, generating, and organizing. This work forms the basis for students to determine which strategies seem particularly effective for themselves as they work to develop an individual approach to writing. Some strategies may lend themselves to practice in isolation within the context of the class. Strategies of this sort include various invention activities, such as brainstorming, webbing, or mind-mapping, forms of free-writing, and the use of non-verbal strategies such as drawing or movement. Whenever a strategy is practiced, it is best if the instructor begins by modeling the strategy, and provides a rich context for practicing it, assuring that the prompt toward which the strategy is directed has meaning and value for the students.

Some strategies, especially planning and organizing strategies, do not lend themselves to meaningful practice in isolation. In order to help students develop and practice these strategies, the instructor may situate them within the context of an assignment sequence, in which students are asked to perform a sequence of process strategies toward the goal of completing a specific writing assignment. In order to emphasize the importance of the practice, teachers can construct evaluation criteria in which various activities contribute to the final grade. Such an approach works best if some degree of latitude is given students in the strategies that they practice, and if they are also asked to monitor and report on which strategies worked best for them. A teacher might assign as many as three or four assignment sequences of this sort in the first weeks of a course, before beginning to move toward a more independent, student-developed approach to process strategy development. The goal of the sequence is not simply to practice the strategies, or to finish the paper; rather, both ends are important, with the linkage between them the key. Such an approach increases the opportunities for teachers to learn about their students as writers, and to begin developing a collaborative, individualized approach. By the time the explicit phase of instruction has ended, students should have encountered and practiced a broad range of planning, generating, organizing, and editing strategies, and should have begun to develop their own hypotheses about which strategies work for them.

Individualizing the Process

The work of supporting students as they develop an individualized approach to writing begins during the explicit-instruction phase, as the instructor develops a diagnostic sense of the student, and enters into a collaborative dialogue about strategy development and use. In general, the teacher has two key roles here. The first is to help students see which components of the process of writing need the most emphasis; and the second is to help the student define individual strategies within each component, as well as linkages between strategies, that seem most promising and effective.

Ultimately, the quality of this work will lie in the way and extent to which a writing instructor is able to understand the learning needs of individual students and collaborate with

them on that basis. But it is also possible to make a few generalizations, based on broad categories of learning needs, that can help guide this work. Although all students need to develop the ability to plan and set goals, to generate information, materials, and ideas for the substance of this work, and to organize these materials as the basis for executing a successful draft before editing, specific areas of focus will depend to a great extent on learning profiles that tend to be shared by groups of students within the diverse classroom. In addition, it is possible to make some generalizations about how individuals might focus within each area.

In terms of planning for students with attention disorders that make previewing, outcome estimation, and self-monitoring problematic, it is essential that planning activities be explicit, and performed in depth rather than superficially. Such students may need to break down the process of writing a paper to a specific daily schedule, with checkpoints or benchmarks at each step along the way. Likewise, students who are academically inexperienced and who do not understand the nature and requirements of specific assignments or discourse conventions will benefit from working out a plan for the paper in advance in some detail. All writing involves at least some element of planning, and the more explicit and articulated this element is for inexperienced writers, the more likely they are to produce a final product that reflects their actual abilities. The teacher may also want to look for students in whom planning is a strength; some students have strong executive skills in other life areas, which can be adapted and applied to writing.

In terms of generating, students with language-based learning disabilities, students for whom English is a second language, and those for whom standard written English differs broadly from their own oral language will all benefit from a focus on generating language, information, and ideas before drafting. In a sense, the goal is to produce the raw material of the paper beforehand, even down to the sentence level. This also should be an area of focus for students who have difficulties with academic or text-based tasks, or with verbal reasoning tasks, enabling them to work through such elements as vocabulary, concept formation, and relationships between ideas before drafting. For students of this sort, the attention paid to generating language in depth before beginning to structure a paper will help greatly with issues such as coherence and development. In addition, by allowing students to come to the drafting stage with much of their language already on paper, a generating-rich approach will also reduce the sort of cognitive overload that often gives rise to accidental errors in mechanics and grammar. The area of generating or invention is one that lends itself to a great number of possible strategies, going beyond brainstorming, mind-mapping, and various free-writing strategies to encompass activities such as drawing, movement, model-building, and the like (Klein & Hecker, 1994). However, it is important to note that for some students, over-generation of text and an accompanying disorganization may be major writing issues, and the focus should instead be on finding ways to limit and shape, rather than increase, the flow of language. This is particularly true of some students with ADHD.

For most students, the work of organizing and structuring their ideas should not begin until an adequate amount of time and energy has been spent in invention activities, or the risk is a final draft that is too tightly controlled and underdeveloped. At the same time, organizational

elements, such as the definition of paragraph topics as part of an overall outline, can also act as heuristics for invention. While students should be encouraged not to develop a thesis and sub-topics too early, the sooner they can construct a rough organizational plan, the sooner they can be sure that activities such as focused free-writing, mind-mapping, and the like will be purposeful. Organization is also an area that may lend itself to innovative strategies that go beyond traditional outlining, such as using three-dimensional models to depict a paper's idea structure, or using large sheets of paper, such as flipchart paper, to paste on the material for different parts of an essay.

In terms of drafting, the actual work of translating the raw materials into a logically-sequenced, coherent, and developed paper, key areas of focus include the physical components involved in writing, the task environment, and all of the ways in which the potential for cognitive overload can be reduced, as through the strategies described above. It may be useful for students to focus on how writing affects them physically, and to look for ways to work against physiological phenomena, such as under-arousal or over-arousal, or what Larson (1985) calls the boredom and anxiety scenarios. Elements such as the time of day, the place in which writing occurs, the duration of a writing episode, all offer potential to positively or negatively impact the quality of what is produced.

In terms of revising and editing, the key is to build the former into the process from the start, and to defer the latter until a full draft has been produced. It is important that the teacher not expect that a student who is incapable of writing an adequate draft can somehow be capable of the much more complicated work of making large-scale revisions in a flawed product. One interpretation of the many studies that find student or novice writers to be poor or superficial revisers is that the level of skill involved in effective revision is beyond the scope of inexperienced writers, and should not be expected of them. If the final product is deeply flawed, the best thing is to treat it as though it were part of the generating process, and start the composing process from there, or else put it aside and move on to the next assignment.

By the same token, students should be encouraged not to edit their writing too closely until they have produced what they set out to say. Too great a concern in the early stages of writing with mechanics or spelling may often result in papers with simplified language, syntax, and ideas, despite the student's intellectual capabilities. Premature editing may also be a significant contributor to writer's block among students who have difficulties in that area (Rose, 1984). Instead, students might be encouraged to follow editing protocols and to use proofreading checklists once they have produced a draft. These can be developed to fit an individual's idiosyncratic difficulties (e.g., with certain spelling patterns), and may also contain general elements that apply to all students in a class.

The final point about developing an individualized writing process is that it is not simply the strategies one uses within a given area that count; the key is to develop linkages between various strategies that allow for a process that extends purposefully and efficiently over time. The work of developing these relationships inevitably must involve collaboration between the teacher and

the student, with the teacher best positioned to suggest sequences of steps that may work for the student, either in general or for completing a specific assignment.

Self-Reflection and Independence

In providing this model, we attempt to help students understand the concept that writing is a process, one that involves many different sub-processes. In particular, we focus on the relationship between specific components of the process, and how they are affected by individual learning styles. In order to make such a process-orientation work within a diverse group of learners, it is essential that students share responsibility, and help to direct their own progress. For students who engage fully in the reflective exercises and experimentation with process strategies that this teaching framework suggests, progress is likely to be relatively swift, and the burden on the teacher manageable. To make such an approach work with students who resist it, who wish to be passive recipients of instruction or who would prefer to avoid writing altogether, is probably impossible. But neither will any other approach truly succeed with such students. In fact, this framework may have a greater chance of engaging students and fostering a climate in which their attitudes about writing and learning can begin to change. Whether or not this occurs lies largely outside the teacher's control, but there are some things one can do. Being explicit about the goals and process of the course, as well as the rationales that underlie them, at the least gives students the responsibility to either accept or reject those goals explicitly. In general, teacher practices that emphasize the role of student choice and that place the locus of control within the individual are essential. The process approach defined here also allows students to build success incrementally, and to receive recognition for engaging with the work of the course, even as their writing improves more slowly. Finally, all of this work on developing process strategies must be situated within a course content that is engaging and that enables students to do work that is challenging and academic in nature.

The ultimate goal of the teaching framework outlined here is to make the teacher irrelevant, and to put students in charge of their own progress and development as writers. This will not occur within a single course, and certainly not at the developmental level. But if students can end a semester understanding better how writing works as a cognitive activity and a communication tool, more self-aware about themselves as learners and as writers, and aware of the kinds of strategies and instruction that work best for them, a foundation will have been laid for true writing development.

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