Our goal in this chapter is to review theory and research on the writing process, as well as research concerning the influence of the National Writing Project (NWP) in training teachers and in advancing the pedagogical principles associated with the writing process. First, we provide a historical overview of the writing process. Then, we critique studies that evaluate the writing process in terms of its impact on K–12 students and on how writing is taught. This is followed by a review of the research on the NWP model for professional development. Finally, we make suggestions for needed research.

Our literature review reveals that most of the articles and reports on the writing process are not research reports. Many raise questions that are not empirically answerable. Moreover, numerous published works that address the writing process and deal with empirically answerable questions do not employ empirical methodology to answer the question(s). In this chapter, we include only research reports from the professional literature that describe an attempt to attain empirical information about a specific question related to the writing process. Furthermore, we report in this chapter only studies in which the research process is clearly described. The research designs include experimental, quasi-experimental, comparison, pre- and postassessments, survey, correlational, and case study. For the most part, our sources are research articles published in professional journals; however, our review of the literature also extends to dissertations and research published in edited books. We have sought to include an information base drawn from diverse fields such as psychology, English, rhetoric, regular and special education, and education of English language learners (ELLs). We limit the research to studies that address kindergarten through high school-age subjects, even though the bulk of research on composing is with college students and adults.

The understanding of what constitutes the writing process instructional model has evolved since the 1970s, when it emerged as a pedagogical approach. In the early years, it was regarded as a nondirectional model of instruction with very little teacher intervention. In his review of research on composition from 1963 to 1982, Hillocks (1984) concluded that the teacher’s role in the process model is to facilitate the writing process rather than to provide direct instruction; teachers were found “not to make specific assignments, not to help students learn criteria for judging writing, not to structure activities based on specific objectives, . . . not to provide exercises in manipulating syntax, not to design activities that engage students in identifiable processes of examining data”
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(p. 162; emphasis in original). It is not surprising that the research Hillocks summarizes showed minimal impact on the quality of writing products as a result of this “natural process mode.”

In the formative years, the process approach model was regarded as applying mainly to stories, was linear and prescriptive, merged proofreading and editing as the same thing, and usually did not involve direct instruction—a sort of anything-goes model whereby the process was valued over the product. In this early model, a simplistic pedagogy resulted: After their teacher describes the four stages, students recall and rehearse the steps, use the process to produce a story, and get into groups to share their stories and gain feedback. In the literature in special education, such instruction to help students plan, organize, and carry out a writing task is called teaching “plans of action” (Gersten & Baker, 2001). Such plans comprise only some of the procedural tasks of the current process model.

Today, most researchers of the process model recognize that it involves both procedural knowledge and many other kinds of strategies that can be nurtured and directly taught, including activating schemata to access prior knowledge; teaching self-regulation strategies; helping students understand genre constraints; guiding students in re-visioning and in editing surface errors; providing structured feedback from teachers and peers; teaching the differences between reader- and writer-based prose; developing audience awareness and effects of audience on style, content, and tone; and dealing with emotional barriers, to name a few. In general, those studies that view the process model as encompassing more teacher direction in the process show positive effects on the quality of students’ writing, on their view of themselves as writers, and on their understanding of the writing process. For example, a meta-analysis of 13 studies with learning disabled students (Gersten & Baker, 2001) concluded that an effective comprehensive writing program in special education should entail explicit teaching of “(a) the steps of the writing process and (b) the critical dimensions of different writing genres . . . as well as (c) structures for giving extensive feedback to students on the quality of their writing from either teachers or peers” (p. 251). Our review of the literature reveals that these elements also characterize effective writing instruction within regular education classroom settings.

Furthermore, current researchers recognize that as a writer matures and internalizes the overall procedures and strategies for producing texts in various genres, these become automatized. They occur more efficiently throughout the writing process, and not in sequential steps, as noted in the change in the professional literature in referring to the writing process as “recursive.” Furthermore, the emphasis today on state academic standards is influencing how the process model is implemented and tested. In his argument that assessment creates artificial conditions for applying the writing process, Schuster (2004) sarcastically says that state writing tests should really be labeled “state drafting tests” (p. 378). As a result of new theories, new research, and the changing status of writing in the curriculum, the process model has evolved. Teaching the process model now demands careful scaffolding and creating lessons that traverse the entire process; researching the process model in all its inclusiveness is a multilayered process demanding a variety of research methodologies. As we learn more about what is entailed in teaching and learning the writing process, the definition and the pedagogy of the process model are likely to change.

Historical Overview of the Writing Process

The key ideas and foundational practices of the writing process can be traced back to early Greek and Roman models of teaching rhetoric (Bloodgood, 2002; Winterowd & Blum, 1994). The professional literature does not mention the writing process until Day’s (1947) discussion of the seven steps of the writing process. Mills (1953) argued that “the basic failure in our teaching centers, in my judgment, is our unwillingness or incapacity to think of writing in terms of process” (p. 19). Later, a description of a four-stage writing process garnered from interviews with 16 published writers appeared in the introduction to a book edited by Cowley (1958).

Many of these published writers spoke of meeting regularly with other writers to share
their works in progress, though this was a rare practice in the schools until the 1970s. The idea of planning instruction along the lines of how real writers write is frequently attributed to the seminal contributions of Peter Elbow, Janet Emig, Donald Graves, Donald Murray, and Mina Shaughnessy (Jensen, 2002; Smith, 2000a, 2000b). In the 1970s, a group of teachers in the San Francisco Bay Area began to share their own writing. They compared the model for how professional writers compose with how writing was commonly taught in the schools, labeling their nontraditional instructional model “the process approach” (Gray, 2000; Wilson, 1994). These early proponents of the process model emphasized a balance in instruction between writing processes and products. Since the 1980s, the process approach to teaching writing has emerged as the primary paradigm, so much so that many state and local school systems have mandated it as the gold standard for instruction in K–12 classrooms (Patthay-Chavez, Matsumura, & Valdés, 2004). Textbooks often translate the process into a prescriptive, linear formula for producing a paper, which is not truly representative of the stop-and-start, recursive process used by professional writers, who are also writing for authentic audiences and not for classroom teachers.

Over the past 30 years, the definition and elements of the writing process have been reinterpreted. Initially, most researchers proposed a three-stage writing process. Rohman’s (1963) model of prewrite, write, and rewrite is the most widely referenced explanation of the writing process. However, in his dissertation about the composing process of four high school honor students, Brozick (1979) concluded that the writing process is much more dynamic and is contingent upon numerous variables and influences such as purpose, audience, type of writing, and the writer’s personality type. Larsen (1983) argued in her dissertation documenting the history of the writing process that by the mid-20th century, writers were encouraged to compose recursively. However, it was not until the work of cognitive researchers, such as Flower and Hayes (1980, 1981), and Bereiter and Scardamalia (1987), that most researchers and practitioners questioned the linear-prescriptive view of the composing process and embraced one that is recursive and more complex. Numerous other writing experts have noted that the writing process is individualized and does not occur in any fixed order (de Beaugrande, 1984; Bridwell, 1980; Witte, 1987). Chapter 2 of this volume is devoted to cognitive theories of writing development.

Researchers who subscribe to this paradigm regard the writing process as mainly a series of problem-solving tasks (Braaksma, Rijlaarsdam, van den Bergh, & van Hout-Wolters, 2004; Bereiter & Scardamalia, 1987). Goldstein and Carr (1996), authors of the summary report of National Assessment of Educational Progress (NAEP), describe a process in which writers make multiple decisions:

“Process writing” refers to a broad range of strategies that include prewriting activities, such as defining audience, using a variety of resources, planning the writing, as well as drafting and revising. These activities, collectively referred to as “process-oriented instruction,” approach writing as problem-solving. (p. 1)

Most educators today hold this view that producing a written text is a mental recursive process coupled with procedural strategies for completing writing tasks. Consequently, the instructional strategies associated with the process model have changed. Now they commonly include explicit instruction in self-regulation, searching prior knowledge, goal setting, and other strategies not included when the process instructional approach was introduced.

In terms of research, examining a student’s declarative knowledge of steps makes for a clean study; however, it does not account for all the facets of the recursive process model and its accompanying pedagogy that we recognize today. Furthermore, as Lipson, Mosenthal, Daniels, and Woodsie-Jiron (2000) discovered in their research, even those who subscribe to a definition of the writing process as recursive vary in how they implement the writing process in their classrooms. This variation further complicates interpreting the effects of using the process approach in research studies or generalizing across studies.

Jensen (1993) quotes Colette Daiute as saying “The major contribution to understanding writing in the past 30 years has
been the realization that writing, like reading, is a complex process, influence by many factors” (p. 292). The writing process approach was validated in 1992 by the National Council of Teachers of English and the International Reading Association, when they defined Content Standard 5 for the English Language Arts, K-12: Students are expected to use writing process elements strategically (De La Paz, 1999).

**Early Studies of the Writing Process**

The most well-known and cited study on the writing process is Janet Emig’s (1971) dissertation on the composing processes of 12th-grade writers. Emig employed case study methodology to interview eight students to delineate the processes they went through when completing writing assignments. Additionally, on three separate occasions, Emig asked the subjects to complete a writing assignment, composing aloud while she recorded each subject. Emig concluded that writers engage in two distinctive modes of composing—extensive, to convey a message; and reflexive, to explore one’s feelings. Each entailed its characteristic process.

Over a 5-month period, Donald Graves (1973) gathered data during five distinct phases of his research. First, he examined the writing folders of 94 students, looking at their thematic choices, the frequency of their writing, and the types of writing. In the second phase of his study, he observed 14 different children while they were composing. During the third phase of the research, Graves interviewed 9 boys and 8 girls about their views of their own writing and the concept of a good writer. Finally, he conducted a case study on 6 boys and 2 girls who were purported to be representative of 7-year-old children. In his study, and similar to the later findings of numerous researchers (e.g., Brozick, 1976; Gundlach, 1977), Graves concluded that multiple variables, frequently unknown to the writer, influence the writing process.

Based on his personal experiences of writing in college, Peter Elbow (1973) challenged the emerging concept of the writing process that basically viewed writing as a linear, two-step process of writing and editing. He argued for a flexible prewriting stage, noting that it was counterproductive to have a clear picture in one’s mind of a finalized version before one began writing. Elbow viewed the writing process as a series of problem-solving steps one goes through in order to discover what he or she knows and feels about a subject. The writer is thereby freed from having to know all of his or her meaning before writing any of it. Elbow has had a powerful influence on practices, even though his study was a reflection on his own experiences as a struggling writer and, like Graves’s study (1973), did not employ experimental design.

One criticism during this era of research on the writing process was that the model is based on the processes that professional writers use. Smagorinsky (1987) noted that the definition of “professional writers” was narrow, including mainly literary figures. Because the theory behind the process model relied on the genre of narratives about personal experiences, Australian researchers challenged the implicit assumption in the American model that children have an innate understanding of genre structures (Cope & Kalantzis, 1993; Hicks, 1997). Other criticisms issued from educators who argued that it is a major pedagogical leap to assume that immature writers, who are at a different developmental stage, as well as writing primarily for classroom audiences, are able to apply principles of process writing at the same level as adult writers. Over time, the understanding of the process model, and thus the research, grew to encompass more genres and broader based pedagogy.

**Research Studies on the Effectiveness of the Writing Process**

Commenting on the 1992 NAEP assessment, officials asserted that “teaching the cluster of writing techniques known collectively as ‘writing process’ is associated with higher average writing proficiency among students” (Goldstein & Carr, 1996, p. 1). Their analysis is based on the self-reports of 29,500 students in 1,500 schools, which indicate that students whose teachers implement writing process techniques “almost every day” consistently obtain the highest average writing scores on the NAEP writing assessment. The 1998 NAEP writing assessment of 17,286
fourth-grade teachers and 14,435 eighth-grade teachers revealed that, across the United States, considerable time is devoted each week to working with students on the writing process (Greenwald, Persky, Campbell, & Mazzeo, 1999). The data from the NAEP assessments in 1998 and 2002 that correlate the amount of time spent on the writing process with student achievement are still unavailable. Except for the NAEP assessments, few large-scale studies are specifically designed to study the relation of the process instructional approach to the quality of written products. Fewer yet use an experimental and control group design.

Even the NAEP data are so broad that they do not give us clear evidence about what kind of instruction is regarded as “process writing.” Patthey-Chavez et al. (2004) concluded that “students appear to respond to the type of feedback they receive, and when they are asked to standardize their writing rather than to develop it, that is precisely what they do” (pp. 469–470). So if teachers embrace a standardized linear model of the writing process, or an open-ended recursive model, or a direct instruction model, or an integrated model, or a writing as problem-solving model, their students will respond accordingly. The authors of one of the studies we reviewed (MacArthur, Schwartz, Graham, Molloy, & Harris, 1996), cite a similar comment by Michael Fullan (1982) that “teachers may reject innovations not consonant with their current beliefs and practices” (p. 169). This principle pertains to how teachers—and, ultimately, researchers—define the writing process and interpret findings.

In our review of the research, we found that researchers hold surprisingly different views of what the process approach entails. For example, some see it as a loosely monitored series of steps, a “natural process” in the context of authentic tasks, without explicit instruction in planning, revising, and other strategies (MacArthur et al., 1996). In this view, “process writing [is] primarily based on indirect rather than direct methods of instruction” (Graham & Harris, 1997, p. 252). On the other hand, others regard direct strategy instruction and guided practice integrated into the writing process as crucial to the definition of the process approach (Applebee, 1986; Atwell, 1987; Calkins, 1986; Cramer, 2001; DeFoe, 2000; Honeycutt & Pritchard, 2005; Poidexter & Oliver, 1998/1999). Cramer (2001) sees the writing process as “a set of theories, procedures, and activities which emphasize the operations, changes and procedures by which writing is accomplished” (p. 53). Applebee (1986) construed the writing process as “strategies that writers employ for particular purposes. For difficult tasks, writers will use different strategies, and for some tasks these strategies may involve no more than the routine production of a first and final draft” (p. 106). Hence, the process writing that researchers have studied may be a routine first and final draft devoid of specific strategy instructions, or it may be a framework in which strategies and skill development are embedded.

To complicate matters even more, the basic definition of the process model has evolved in the theoretical literature, so that now it is regarded quite differently than in its early years, when, for example, explicit instruction, reflection, guided revision, and self-assessment were not commonly associated with the process model. These varying views of the process approach alert us to the potential bias exerted by a researcher’s paradigm and definition of the writing process.

An ERIC (Educational Resources Information Center) search of dissertation abstracts on the writing process, as well as a search for studies in electronic educational databases, reveals that during the 1970s and 1980s, research focused on how components of the writing process are related to specific variables, such as syntactic complexity (Moriaity, 1978); catalysts for the writing process (Schwartz, 1980); writing apprehension (Butler, 1980); language ability skills (Hayes, 1984); journal writing (Robinson-Metz, 1985); thought and emotions (Miller, 1983); prior knowledge (DeGoff, 1985); ELs (So, 1986; Watkins-Goffman, 1986); and verbal skills (Robbins, 1986). All of these studies show some positive association of the writing process with the variables being studied. However, the variables did not always include improved products.

From the late 1980s through 2003, research increased that was specifically designed to measure the quality of students’ written products as a result of using the writing process. Robinson (1986) conducted an experimental study with 120 fifth-grade stu-
dents to investigate the effects of process writing instruction on the number and levels of revision as a result of 1- and 2-day lessons on revision. She found that students taught using the process approach scored higher on final writing samples and engaged in 2.5 times more revisions than students taught using a traditional method of composing. Croes (1990) used a nonequivalent control group design to study the efficacy of the writing process in helping 157 learning disabled students in grades 1–5 improve their overall writing performance. Harris (1992) investigated the relationship between writing quality and attitudes toward writing in a study of 34 third-graders randomly assigned to one of four treatment groups. These last two studies indicate some positive effects of the writing process on the variables examined.

More recent studies have involved the use of personal correspondence and the writing process by 236 second-grade children in traditional and process approach classrooms (Hamilton, 1992); the writing process as the context for developing 16 “nonnative” students’ writing ability (Chiang, 1992); a case study of the development of writing skills over 1 year for three first graders using a process approach (Eitel George, 1994); a comparison between the effects of using traditional and process approaches on second graders’ written retellings of stories (Boydstun, 1994); a description by gender of writing processes and attitudes about writing of 41 first graders (Billman, 1995); the effects of explicitly teaching the writing process to improve the writing skills of 15 seventh-grade Title I students (Dean-Rumsey, 1998); and the impact of direct teaching of writing strategies and skills to middle school students to facilitate their execution of the writing process (De La Paz & Graham, 2002). Again, all of these studies show to varying degrees positive results on writing products by using the writing process.

The following examinations of two experimental and two qualitative studies with K–12 students are illustrative of research designed specifically to measure how instruction in the writing process affects the overall quality of the products. Scannella (1982) conducted a yearlong experimental study of the effects of the writing-as-process model on the writing of 121 average and above ninth- and tenth-grade students. Students assigned to the experimental group received instruction in the process approach to writing based on Emig’s research; the control groups received instruction using the standard methods of teaching composition at the time (textbooks, worksheets, teaching grammar in isolation, providing the topic to students, giving assignments and due dates). Scannella found that, overall, students taught in the process method evidenced greater improvement in their expository writing, but not in their creative writing, than did students in the control group. Furthermore, the experimental group evidenced a statistically significant increase in positive attitudes toward writing, whereas the control group showed a slight decrease in overall positive attitudes toward writing.

In an experimental study with 654 third-, fourth-, and fifth-grade students, Bruno (1983) compared the writing achievement of students taught using the writing process method with that of students taught using the textbook and workbook method. Using pre- and posttests, Bruno found that the writing of students taught using the writing process approach was rated superior to that of students using the traditional method, especially in terms of the overall organization and format.

A research team funded by the National Institute of Education (Graves, 1984) published 26 articles about the writing behaviors of 16 children in five elementary classrooms in a New Hampshire school. A contribution of this qualitative study was the research method of observing children while they write, rather than using retrospective analyses of written products and postcomposing interviews. One member of this team, Lucy Calkins, used direct observations of children composing, field notes, transcripts of interviews with children and teachers, collections of all drafts, and videotapes of children during composing and conferencing. In her 2-year longitudinal case study of one child’s writing development in a writing workshop, Calkins (1982; 1983) charted writing samples for changes in punctuation, handwriting, spelling, topic, structure, flow, and readability. She observed the child’s daily writing behaviors through third and fourth grades, documenting the child’s gradual grasp of the revision process, her development of the
writer’s executive functions, and her internalization of writing and revising strategies. Calkins’s findings indicate that as the child internalized a repertoire of process writing strategies, especially revising strategies, her writing products steadily improved. Considering how limited Calkins’s research was—just one child’s processes—her research has had enormous impact on how the writing process is implemented in the elementary grades.

The work of Graves and Calkins is regarded as contributing to theory from a practitioner’s perspective, but since the samples are small and the designs are not experimental, this research has been criticized. Smagorinsky (1987), for example, states that the case study methodology that Graves and his colleagues advocated is merely “reportage” (p. 333). Validity concerns are legitimate. Graves and Calkins employed an early application of qualitative research that did not specifically address the numerous types of validity that are now expected. Recent qualitative research is more rigorous in addressing types of validity, such as construct validity, internal validity, external validity, democratic validity, process and outcome validity, catalytic validity, and dialogic validity (Anderson, Herr, & Nihlen, 1994; Bogdan & Bilken, 1998; Erlundson, Harris, Skipper, & Allen, 1993).

Honeycutt’s research design (2002; Honeycutt & Pritchard, 2005) explains how he triangulated the data, kept field notes to record any researcher biases that might emerge, and transcribed video and audio records that were reviewed with the subjects for accuracy. His purpose was to create a grounded theory about good readers who are poor writers but have no identifiable learning or behavioral disability. His definition of the process model includes explicit strategy instruction, such as schema strategies for story grammar and searching prior knowledge, as well as guided practice, peer group feedback, teacher–student conferencing, and the usual stages for producing a draft. In examining the impact of a process-based model on improving student written products over 16 weeks of instruction, Honeycutt used quantitative data such as standardized and teacher-developed pre- and posttests, and scores on a writing test and on the Writer’s Self-Perception Scale (WSPS) (Bottomley, Henk, & Melnick, 1997/1998), as well as qualitative data consisting of teacher lesson plans, student writing portfolios, written reflections by students, instructor’s notes on conferences, and individual and focus-group interviews with 11 fifth-grade students and seven teachers. Three types of procedures (Denzin, 1989) were used to verify the data: (1) across collection methods (document analysis, scores on the writing samples and the Writer Self-Perception Scale, individual interviews, and focus groups), (2) across data sources (students and teachers), and (3) across investigators (two researchers, formal member checking in focus groups, and informal member checking with individuals). In the context of a writing workshop, Honeycutt (2002) examined the effects of explicit instruction and practice in how to apply writing process strategies and strategies for dealing with negative emotions that arise during various stages of the writing process. Pre- and posttests indicated that the overall quality of students’ texts improved when students (1) internalized specific strategies for prewriting, writing, and revising; (2) employed self-regulation strategies to monitor the development of a text; and (3) activated strategies for dealing with negative emotions that arise during the composing process.

Like Calkins’s (1982) case study subject, the students in the Honeycutt study (2002) practiced specific processes until the processes became automatized during composing. Honeycutt’s research introduced a grounded theory about what subprocesses and specific instructional aspects of the writing process exert the most influence on students’ writing dispositions and writing products. More studies are needed to study and refine this theory, especially in light of the recognition that some practitioners using the process approach do not see it as encompassing explicit instruction or dealing with emotional issues.

Although most researchers agree that the strategies and mental processes involved in the writing process are recursive and interlocked, many have discovered that studying one component at a time makes an enormously complex research task more manageable. Thus, to date, the vast majority of the research has investigated specific components of the writing process, especially prewriting and revising.
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Affording time and presence to prewriting in the classroom is a major consequence of the process approach. Until the advent of the process model, prewriting was usually not addressed apart from a teacher making the assignment and giving due dates. Now, prewriting is explicitly addressed, with the purpose of teaching students to develop personalized strategies that they can apply not only to develop content—as was the focus originally—but also to create structure and organization. In the early years of the process model, prewriting was considered one step in the process—the writer did it and dispensed with it. Now, as with the other stages of the process approach, prewriting is regarded as recursive; prewriting strategies may emerge during the revising stage, for example. Moreover, prewriting can take the form of inquiry, a method that Hillocks (1986) found to be over 2.5 times more effective than the study of writing models, a traditional prewriting activity. Although inquiry can occur anytime during the writing process, it constitutes an effective prewriting strategy in that students’ focus is on transforming raw data.

Like prewriting, revision instruction was largely neglected in composition classes until the process approach. Before this, revision was usually provoked as a mandate to students to “improve your paper,” made after the paper was complete and had been turned in to the teacher. The results were usually editing, not a true re-visioning of the paper, as noted in the title of Lee O’Dell and Joanne Cohick’s (1975) article, “You Mean, Write It Over in Ink?” Today, the counterpart would be, “You mean, run spell check and laser print it?” Numerous researchers and writers view revision as the most important part of the composing process; it has also been the most researched subprocess of the writing process. Generally, revision has been understood not as a step in which the author corrects errors, but as a process of discovering what one has to say and adapting the text to maximize the clarity of the message (Calkins, 1986; Elbow, 1973; Graves, 1983; Murray, 1983; Sommers, 1982).

Taken together, these studies of the impact of using the process approach on student achievement indicate mainly positive effects, but they are based on uneven implementations of the writing process. In their review of the research on process writing, Dyson and Freedman (2003) noted that even though the 1998 NAEP found a strong correlation between higher scores and application of the writing process, it is “difficult to evaluate the degree to which the approach in [the United States] as a whole has improved student writing” (p. 976). Furthermore, Dyson and Freedman argued that the research on the writing process does not offer any “simple prescriptions for practice, but it can offer a vocabulary for talking about the nature of writing” (p. 974). Cramer (2001) asked whether there is sufficient weight in the criticisms to abandon the process model. As a result of our review of the literature, we agree with his answer:

It is best to face this truth: the writing process has its weaknesses; it is poorly implemented in many instances; it is not a panacea. But it is a better candidate for improving writing performance than the traditional approach. ... We must listen to the critics; we must be willing to rethink and adjust our theories, procedures, and practices. But there is not sufficient evidence to cause us to abandon the writing process. (p. 39)

Research on the Impact of the National Writing Project Professional Development Model

As an exemplary professional development model with roots in the 1973 Bay Area Writing Project, the NWP “eschews a singular formula for teaching writing” (Friedrich & LeMahieu, 2004, p. 19). However, “the fundamental belief of the NWP that the process of writing needs to be taught deliberately, systematically, and extensively in the classroom has deeply affected writing instruction at all grade levels during the decade of the 1980’s” (Inverness Research Associates, 1997, p. 19). Our review of the current literature indicates that the process pedagogy has continued to affect writing instruction in the new millennium.

The NWP summer institute is the enterprise most closely identified with the process approach. Blau (1988) characterizes the salient features of NWP institutes: “Teacher consultants emphasized teaching writing as a process, spoke of an instructional sequence that proceeded from fluency to form to correctness, practiced the use of writing response groups, and explored the various
ways that writing can be used as an instrument for learning (p. 30). As already noted, these have been studied as teaching techniques in separate investigations, as well as collectively in an instructional approach called the process model.

The NWP has compiled statistical data measuring its far-reaching influence on teachers and schools. Reporting to the 2003 NWP meeting, Inverness Research Associates (St. John, 2003) shared these figures:

1. The steadily growing NWP network consists of more than 175 college-based sites in 50 states, Washington, DC, Puerto Rico, and the U.S. Virgin Islands, annually serving approximately 125,000 K–16 teachers (roughly 1 out of 40 teachers in the United States) in all disciplines.

2. Over 30 years, the NWP has served approximately 3.5 million teachers, nearly the same as the total number of teachers in the United States today.

The literature on the NWP is replete with positive testimonies of the impact of NWP training on teacher attitudes and on their confidence as writers and as teachers of writing. There is no doubt that the NWP has been a major force in accentuating the role of writing in learning, in reinvigorating teacher enthusiasm, in garnering respect for what teachers of writing accomplish in their classrooms, and in professionalizing the teacher as leader, teacher consultant (TC), and researcher. These numerous studies are not addressed in this chapter. Instead, the focus is on those studies about NWP impact on teacher practices and on student achievement.

Empirical evidence of the impact of NWP training on teacher practices and student achievement is relatively thin, as compared to reading. This is largely due to the “messy process” of studying staff development in general (Pritchard & Marshall, 2002a; Wilson & Berne, 1999), and writing in particular (Daiute, 1993; De La Paz & Graham, 2002; van den Bergh & Rijlaarsdam, 2001). A recent publication (National Writing Project & Nagin, 2003) devotes an entire chapter to the multiple challenges faced by educators in teaching writing. To that, we can add researching writing.

Do NWP teachers implement the strategies for teaching writing that they learn and practice in the institutes and in outreach projects? The particular classroom practice that is most influenced by training evolves as the sophistication of NWP participants grows. In the early years of the NWP, prewriting was a new concept; later, it was sentence combining, the use of rubrics, revision, portfolios, the reading–writing connection, and writing across the curriculum. Now, the role of reflection, the subprocesses of writing, standardized assessments, writing with special populations, and technology and blogs in the writing class have emerged as topics in the summer institutes. That NWP institutes change as schools and communities develop is a strength of the NWP network; it is also a reason why documenting NWP impact in highly controlled empirical studies is difficult. Most studies have focused on impact on teachers rather than on students. In this section, we define “teacher impact” as influences of the NWP on teaching practices rather than on teachers’ attitudes, creativity, leadership skills, their own writing, and other dimensions abundantly addressed in numerous descriptive publications and dissertations.

In a study of a writing project in the Midwest, Pritchard (1987) used a questionnaire administered 3 years after teachers participated in NWP training to compare the teaching strategies of NWP-trained and nontrained teachers, and found statistical differences between groups for only 22% of the strategies. Studies using surveys indicate that trained teachers use a greater variety of activities (Pritchard & Marshall, 1994), and that trained teachers show notable changes in how they teach writing, especially in the amount of time devoted to writing (Bates, 1986; Carter, 1992; Fanscali, Nelsenstein, & Weinbaum, 2001; Fischer, 1997; Hampton, 1990; Laub, 1996; Roberts, 2001; St. John, Dickey, Hirabayashi, & Stokes, 2001; Swenson, 1992; Tindall, 1990; Vaughan, 1992; Wilson, 1988, 1994). Large-scale studies by Inverness Research Associates (St. John et al., 2001) show that 95% of the teachers report gaining new teaching strategies from NWP training. Similarly, a 2-year in-depth study of six teachers (Lieberman & Wood, 2003; Wood & Lieberman, 2000) identifies significant impact of NWP training on teaching strategies.

In one study (Pritchard, 1987), a survey of 19 trained and 39 nontrained teachers
about their classroom practices revealed that trained teachers averaged significantly more time in writing lessons, and significantly less time in more traditional activities, such as using references and teaching spelling and vocabulary, than did untrained teachers. One interpretation derived from this study was that perhaps the absence of certain practices is what enhances writing growth rather than the presence of certain practices. Furthermore, Pritchard concluded that a process orientation does not preclude attention to the product, and that the “environmental mode” that Hillocks (1984) ascribes to the NWP does not replace the “presentational” mode of more traditional classrooms.

Across two decades of studies, the positive effects of NWP training on teaching practices have been well established. But do students write better as a result of their teachers implementing new practices after NWP training? NWP principles are so instantiated in schools, and in textbooks, that it is a challenge even to define a control group unaffected by the NWP in order to conduct experimental studies about its impact on student achievement. Of the published statistical studies, all main results favor the NWP approach over traditional approaches (Di-Stephano & Olson, 1980; Haugen, 1982; Hawkins & Marshall, 1981; Marshall, 1983; Penfield, 1979; Pritchard, 1987; Pritchard & Marshall, 2002b; Roberts, 2001; Shook, 1981; Shortt, 1986; Zemelman & Wagner, 1982). Two studies were designed to examine impact of the same students 1 year and 2 years after their teachers were trained. Researchers collected more than 18,582 papers for study of impact on 1,622 students after 1 year (Hawkins & Marshall, 1981; Marshall, 1983), and more than 4,000 essays from a sample of 509 of the same students for a study of impact after 2 years (Pritchard, 1987). The strength of these studies from the 1980s is that researchers examined complete data sets for each student (six essays each the first year; nine essays each the second year) rather than one pre- and postsample, as well as determined impact on students in buildings where trained teachers taught (the spin-off group). Students of trained teachers achieved the highest mean scores, followed by students in the schools where trained teachers taught, and then by students of nontrained teachers. This is a testimony to the teachers-teaching-teachers principle of the NWP outreach philosophy.

In another large-scale study, Pritchard and Marshall (1994) evaluated 7,838 pre- and posttest essays of students of trained and nontrained teachers using 11 analyses for comparison among grade level, district, treatment, and control groups. In 9 of 11 analyses, significant differences were found in favor of the students of trained teachers at all levels, with middle school students achieving the highest mean scores, followed by elementary students, and then high school students. Another large-scale study showing the positive impact of the NWP involved 1,900 students in five states (Fanscali & Silverstein, 2002), with essays collected over 3 years.

In a comprehensive study (Pritchard & Marshall, 2002a, 2002b, 2005) of professional development practices in healthy and unhealthy school districts in which NWP outreach programs had been offered, nearly 3,000 writing samples were elicited from students in randomly selected classrooms in randomly selected schools, in 18 randomly selected districts across the United States. Student achievement in writing was used as one measure of impact of the professional development. The students in districts rated as having high health obtained significantly higher mean writing achievement results than students in districts rated as having low health. This study advances the idea that impact of NWP training, or any professional development activity, is highly tied to the culture of support at the district level.

In 2004, the NWP launched a multiyear research agenda using the following criteria: (1) All studies must include a focus on student learning, and in particular, student writing performance; (2) the assessment of student writing must involve direct (as opposed to indirect) assessment of student writing; and (3) each study must include some form of “comparative reference” to allow the logic of the research design to dispel at least some of the most common alternative (and irrelevant to the attribution of impact) hypotheses regarding explanations for observed findings. The design is either comparison groups, or mixed method, or quasi-experimental method. These studies under way should provide data responsive to the local context of particular sites, as well as
data that can be aggregated to evaluate impact across sites to provide a national picture of NWP impact.

**Where Do We Go from Here?**

Critics of the process approach argue that attention to the processes of creating texts has made writing products into by-products. “The process has become so ubiquitous as to mean anything, or perhaps more precisely, it has come to mean almost nothing. Tragically, the art and soul of writing have been lost in the ‘process’” (Baines, Baines, Stanley, & Kunke, 1999, p. 72). Proponents of the process approach say it is only through valuing the process that we help our students find the art and soul of writing.

Our reading of the current literature reveals that most researchers assert that writing and the writing process are best understood as complex phenomena that include not only procedural strategies for going through the writing process to generate text but also a multitude of other strategies to develop specific schemata. These include strategies to help writers understand the context for writing, to tap general background knowledge and reading ability, to sharpen cognitive processes for problem solving, to create emotional dispositions and attitudes about writing, to develop micro-level skills such as spelling, transcription, and sentence construction, as well as macro-level understanding about organization, conventions, cohesion, audience, genre, and topic, to name a few. To complicate matters, findings from reports on the various subprocesses of the writing process contradict one another (van den Bergh & Rijlaarsdam, 2001). These strategies and subprocesses need to be explored in conjunction with the process model; since writing proficiency is recognized as a developmental process, longitudinal studies are especially needed.

A concomitant finding of much of the early research was that multiple factors influence the writing process, such as the finding that there are social benefits in using peer groups. In other words, best practices in the teaching of writing include not only improving writing products but also developing positive dispositions, social behaviors, problem solving, and other skills that have value in and of themselves. Although teasing out the effects of these aspects of the process approach requires complicated research designs, these issues need to be explored in qualitative and quantitative studies.

As a result of the complexity of studying writing processes that are so inclusive, multi-layered, and overlapping, few purely experimental studies have been conducted, and fewer yet on a large scale or with the same population over time. Even when variables are highly controlled, researchers in writing concede that their studies cannot account for all the factors that influence the final product. For example, some studies suggest, but have not proven, that the process approach is most applicable to creating narratives. Theorists have surmised that as the writing process approach evolved, it became fused with personal writing, and this flawed understanding of the process model has persisted with practitioners and researchers (Stotsky, 1995). Needed, and in some cases under way, are studies about the comparative impact of the process approach to teaching various genres of writing. Another persisting misconception is that the process model does not entail direct instruction. In the beginning, the holistic emphasis on developing a writer’s ownership of his or her writing, of creating authentic audiences, and of providing multiple sources of feedback somehow dominated educators’ interest. Studies of the subprocesses of writing were not prominent in the research and still need to be studied as variables influencing writing products.

Since the process approach provided an instructional alternative at a time when traditional methods grounded in rhetorical theory were being challenged, the process model evolved in practice more quickly than did supporting research and theories. Many theories have been used to study writing, such as the cognitive process theory of Flower and Hayes (1981), the natural process model of Peter Elbow (1973) and Donald Murray (1985), and the mental growth model of James Moffett (1981, 1992). Not all derived from or were tested by research. Practitioners still need theories of teaching writing that are firmly grounded in research. This, in turn, should provide a foundation for what professionals consider best practices for enhancing student writing performance.
References


Harris, E. A. (1992). The relationship of attitudes and writing abilities to computer writing and peers critique of writing. Dissertation Ab-
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stracts International, 53(06A), 1828. (UMI No. AA9224268)


Wilson, S., & Berne, J. (1999). Teacher learning and the acquisition of professional knowledge: An examination of research on contemporary profes-


