An Overview of Writing Theory and Research: From Cognitive to Social-Cognitive View

Lucy Chung-Kuen Yao*

Abstract

Writing in academic communities is treated as a mode of learning, but few teachers understand what academic writing is and how it is acquired. In the past three decades, writing theory and research has bloomed in the United States. Thus, the purpose of the paper is to view writing theories critically, and, hopefully, this review will shed some light on the teaching of EFL writing in Taiwan.

Research has viewed writing from two distinct perspectives: the cognitive and the social. The cognitive theorists' main concerns are the individual writer's internal cognitive activities during the process of writing which is composed of three subprocesses, namely, "planning," "translating/drafting," and "revising." The social view, on the other hand, emphasizes that academic writing is a communicative act influenced by the particular social context in which the student writer is situated. The umbrella term "social view" covers the following terms: "social-cognitive theory," "social constructionism," "social interactive theory," "social-historic theory," and "social-humanistic theory." In conclusion, the cognitive view and the social view are not incompatible but mutually reinforcing. Given that we now have a promising theoretical base, it is possible to reconceptualize writing and to teach writing more effectively.

Key words: "academic writing," "cognitive writing process," "social-cognitive theory," "social constructionism," "social interactive theory," "social-historic theory," and "social-humanistic theory."

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An Overview of Writing Theory and Research: From Cognitive to Social-Cognitive View

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I. Introduction

In colleges and research institutes, undergraduate and graduate students are often required to write papers and reports. Writing is treated as a mode of demonstrating knowledge, and is also used by instructors as a mode of prompting independent thinking, researching and learning. It is writing done for academic purposes, that is, "academic writing" (Murray, 1987) in short. Although our understanding of the knowledge and processes that constitute skill in producing written text has increased significantly in recent years, the views toward how writing ability is developed and what goes on in one's mind when one is writing in academic discourse communities are far from being unified. The purpose of the paper is to review these writing theories critically. It is hoped that it will shed some light on the teaching of writing in our EFL curriculum.

Research in this area has viewed writing from two distinct perspectives: the cognitive and the social. From a cognitive perspective, writing is viewed as a knowledge-transforming activity in which cognitive operations are used by a writer to (a) construct conceptual knowledge structures, (b) generate sequences of propositions to describe and reason about one's conceptual knowledge, and (c) produce coherent textual and linguistic structures to represent conceptual and propositional knowledge. A cognitive view of discourse production focuses on the internal cognitive activities and symbolic representations of the writer as an intelligent producer and manipulator of symbolic information. From a social perspective, writing is viewed as a communicative
act involving the production and use of linguistic codes in a culturally defined communicative context. The social view emphasizes that writers participate in a social interaction with a community of readers and responders in a situation for which written discourse has particular socially-defined functions (Bazerman, 1988; Nystrand, 1989). Taken together, the cognitive and social perspectives characterize writing as a structure-building process whose purpose is to communicate conceptual knowledge via natural language (Frederiksen & Donin, 1991).

II. Cognitive View

Over the last 30 years there has been a major paradigm shift in composition theory and research whereby the emphasis has moved from the product to the process of composing. The most well-known pioneer in composing process research is Janet Emig. Emig provided not only a "science consciousness" (Voss, 1983) and a new methodology, but also an agenda for subsequent research, raising issues such as pausing during composing, the role of rereading in revision, and the paucity of substantial revision in student writing. Her monograph "The Composing Process of Twelfth Graders" (1971) led to numerous observational studies of writers' composing behavior during the next decade. Also through the work of Linda Flower and John Hayes, a cognitive theory of composing was introduced to many college teachers. In their book "A Cognitive Process Theory of Writing" (1981), the process of writing is described as "a set of distinctive thinking processes which writers orchestrate or organize during the act of composing, and these processes have a hierarchical, highly embedded organization" (p.366). Their main claims - that composing processes intermingle, that goals direct composing, and that experts compose differently from inexperienced writers - have become commonplace of the process movement. Their research provides valuable information on how writers set goals, how they solve problems, and
how they represent meaning to themselves. Although their work has been criticized on the grounds that their "think-aloud" protocols ("thinking aloud" reports of what is happening as a subject writes) distort the very process they are trying to study (Lunsford, 1980), their work has continued to influence the field of composition research. Through the efforts of many researchers, the nature of the composing process, its components, and its research methodology have become better defined.

The Cognitive Process Model

Writing is a complex process which involves many subprocesses. In the light of its function, it includes three major components, namely, planning (i.e., task-interpretation, goal-setting), translating/drafting, and revising/editing.

1. Planning

Planning is a generic cognitive process that appears to encompass various processes writers often describe as "incubation" (Cooper & Odell, 1978). In Flower and Hayes's (1984) model, planning is "the purposeful act of representing current meaning to oneself". It involves basic cognitive operations such as generating information, organizing or structuring information, and finally setting goals. Academic writing as a problem-solving process begins with identifying or defining the problem to be solved. Writers build or represent such a problem to themselves rather than "find" it (Flower & Hayes, 1980). An initial representation is defined as "an effort to explore the whole rhetorical problem, which we categorized into five key dimensions...‘topic,’ ‘theme or purpose,’ ‘form,’ ‘audience,’ and ‘other task-specific goals’." They found that the less successful writers left many things undone or the problem unattended to (Flower et al., 1989).

In planning, writers appear to draw on three executive-level strategies:
knowledge-driven planning, schema-driven planning, and constructive planning. A constructive strategy which involves setting one's own goals, criteria, plans, and procedures in response to the task is often required in the kind of academic writing which demands knowledge transforming skills. Research has found that the goals that writers set for themselves during task interpretation are linked to essay quality (Kantz, 1989) and that purpose for writing influences planning for global as well as for local aspects of text production (Matsuhashi, 1981).

2. Translating/Drafting

In Flower and Hayes's model, writing is "translating" ideas into words on paper. For some student writers, "an original text already exists" (Sommers, 1980); while others seem to keep "going back to the sense of one's meaning in order to go forward and discover more of what one has to say" (Perl, 1979). With such "retrospective structuring," writers discover new ideas as they write and change their plans and goals accordingly. Bizzell (1986) criticizes the separation of "planning" and "translating" in the Flower and Hayes model. Even though Flower and Hayes allow for language to generate language through rereading, Bizzell claims that the separation of words from ideas distorts the nature of composing.

3. Revising Process

Research suggests that experienced and novice writers differ in their implicit theories of the revision process, in how they behave during revision, and in the changes they are likely to make in the text. For Perl's unskilled college writers, revising is "error hunting" (1979), that is, editing. And, Sommer's student writers who hold a "thesaurus philosophy of writing" (1980), believe that revising is re-wording to "clean up speech" and that most problems in their essays can be solved by rewording. These students are aware of lexical repetition, but not conceptual repetition. On the other hand, revi-
Revision is not a matter of correctness, following the directions in a manual. It is discovering meaning and clarifying it while it is being discovered (Murray, 1981). Experienced writers regard revision as the process of discovering content, structure, and voice (Flowe, Hayes, Carey, Schriver and Stratman, 1986). In Beach's study (1976), the extensive revisers were able to generalize about their plans and problems. However, more revision does not necessarily produce better papers. In Bridwell's study (1980), the most extensively revised papers were at the top and bottom of the quality scale. It seems that the amount of revision is not the key variable. Flower and colleagues (1986) suggest that the two key variables underlying expert performance are likely to be "knowledge" and "intention." A writer needs both declarative knowledge about texts and conventions and procedural or how-to knowledge such as strategies for making revisions, while intention determines whether the writer actually "uses" the knowledge to revise. However, "poor" writers do not necessarily lack "declarative knowledge," "grammatical rules," or composing processes. Poor writers have been identified as those who have not effectively assimilated these processes and often interfered with their thinking by editing their writing prematurely.

Recursiveness of the Writing Process

Composing process is viewed not just as a linear series of stages but rather as a hierarchical set of sub-processes (Flower and Hayes, 1980). The set of processes and subprocesses occur linearly and recursively throughout the writing process (Bridwell, 1980). Recursiveness in writing implies that there is a "forward-moving action that exists by virtue of a backward-moving action" (Perl, 1980). A writer moves in a series of nonlinear movements from one sub-process to another, constantly attending to matters of content, style, and structure, solving continuous sets and subsets of complex cognitive, lexical, syntactical, and rhetorical problems (Sommers, 1979).
However, researchers have found well-differentiated composing patterns between people whose writing expertise was in the area of creative and literary writing (Berkenkotterm, 1983) and people whose expertise was in writing technical reports and documents (Selzer, 1983).

The cognitive model has been criticized for making strong theoretical claims in assuming that relatively simple cognitive operations produce enormously complex actions. Even though cognitive researchers have warned that novice writers cannot be turned into experts simply by tutoring them in the knowledge expert writers have, many writing teachers believed cognitive research could provide a "deep structure" theory of the composing process, which could in turn specify how writing should be taught. Furthermore, the Flower and Hayes' model (1980) had other attractions. The placement of "translating" after "planning" was compatible with the sequence of invention, arrangement, and style in classical rhetoric. It also suited a popular conception that language comes after ideas are formed—a conception found in everyday metaphors that express ideas as objects placed in containers.

### III. Social View

Writing, like other acts of literacy, is not universal but social in nature and cannot be removed from culture. Giroux (1988) accused the cognitive view of neglecting the content of writing and downplaying conflicts inherent in the act of writing. Pedagogies assuming a cognitive view tend to overlook differences in language use among students of different social classes, genders, and ethnic backgrounds. What Giroux sees as a fundamental flaw of cognitivist research is the isolation of part from whole. Johns (1986) also warns that "we may be doing our students a disservice by strictly adhering to all tenets of this process approach" (p.251), and indeed much of the criticism leveled against an overconcentration on process comes from scholars working within the genre-based framework of English for Academic.
Purposes (EAP) and from a systemic-functional linguistic perspective (Gosdon, 1995). One central assumption of the social camp is that human language (including writing) can be understood only from the perspective of a society rather than a single individual. The focus of a social view of writing, therefore, is not on how the social situation influences the individual, but on how the individual is a constituent of a culture. Under the umbrella term of "social view," writing has been discussed with different emphases.

Social-Cognitive Theory

A social-cognitive perspective on writing tries to account for the cognitive operations and representations that underlie the social process of communicating meaning through discourse in a specific social context. The individual, a socially situated reader, writer, or learner, is engaged in the literate act. One of the important proponents is Linda Flower, who started with "a cognitive theory" (1981), gradually turned her attention to "cognition in context," and recently publicized the "social cognitive theory of writing" (1994). Flower’s goal is to develop "social cognitive accounts of how individual students, as thinking personal agents operating within and shaped by a social and cultural fabric, learn. And why they do not learn" (p.33). Thus meaning construction is viewed as "both a private [cognitive] and a communal [social] act" (Flower, 1994). She takes it as her task to show that the cognitive and the social - cognition and context - interact in the construction of meaning, that each shapes and is shaped by the other.

Transition into a "discourse community" is seen as a social-cognitive event. To enter such a community, students need to learn the textual conventions, the expectations, the habits of mind, and methods of thought that allow one to operate in an academic conversation. And, in some cases, they will need to learn a body of topic knowledge as well. To this task, students bring a wealth of prior knowledge, past practices, and tacit assumptions
about school writing—some of which support this transition and some of which complicate it. Conceptualizing this transition as a social-cognitive act of entering a discourse emphasizes both the problem-solving effort of a student learning to negotiate a new situation and the role the situation will play in what is learned. Learning to negotiate a new discourse calls for a rapid growth in strategic knowledge, defined in terms of three key elements: the goals writers set for themselves, the strategies they invoke, and the metacognitive awareness they bring to both these acts.

In the social-cognitive tradition, case studies of academic writers have revealed the composing patterns and strategies that the specific tasks called for in different academic settings. These studies emphasize the differences of each case, but together they help us picture the larger strategic repertoire students are developing in the disciplines. This repertoire includes not only text conventions, rhetorical patterns, and domain-specific organizing ideas, but also strategies for reading and writing and (in some cases) meta-level strategies for interpreting what these different discourses expect. Strategic knowledge is seen as a response not only to the immediate environment—context of the class and the assignment, but to the larger social-cultural contexts reflected by one's prior experiences and knowledge. A combination of protocols, interviews, and texts helps build a picture of strategic knowledge in action, revealing patterns in the ways students engage with academic discourse and suggesting paths by which their powers could develop. Although Flower and her colleagues recognized that "Academic discourse is not the result of a unified cognitive or social process, but is made up of a variety of context-specific practices, some of which are associated with disciplines and genres," they argued for commonality.

During academic writing process, reading and writing are not only cognitive, constructive processes but also social, communicative processes between writers and readers. Two important schools of thought concerned
with these issues are "social constructionism" and "social interactionism" (Nystrand, 1990). Social constructionism concerns itself with the large-scale processes of writers and readers as members of discourse and interpretive communities; relevant research includes work by Bartholomae, Bizzell, Bruffee, and Faigley. Social interactionism concerns itself with dyadic interactions of particular writers and readers; relevant studies include research by Bakhtin, Nystrand, and Tierney. To a great extent, social constructionism concerns itself most immediately with communities of writers and readers, and social interactionism concerns itself with the individual interactions of writers and readers.

Social Constructionism

In the past few years, writing researchers influenced by post-structuralist theories of language have brought notions of discourse communities to discussions of composing. Patricia Bizzell and David Bartholomae, for example, have found such ideas advantageous in examining the writing of college students. Bartholomae (1985) claims that writing in college is difficult for inexperienced writers not because they are forced to make the transition from "writer-based" to "reader-based" prose but because they lack the privileged language of the academic community. When students write in an academic discipline, they write in reference to texts that define the scholarly activities of interpreting and reporting in that discipline.

In general, social constructionism treats writing as the informed activity of members of particular discourse communities (Faigley, 1985). In this view, the community is said to inform its speaker's discourse, which reflects and instantiates the group's ideology. This means that social constructionism generally concerns itself with the relationship of writers and readers by noting the global effects that groups have on their individual members (Nystrand, 1982). In writing research, both Bartholomae (1985) and Shaugh-
nessy (1977) interpret the difficulties of basic writers as a problem of socialization since learning to write entails mastering the ways of speaking of the academic community. In a similar way, academic writing problems of L2 student writers have also been visualized as problems of socializing into the discourse community.

Studies of how students learn to write in disciplines (e.g., Berkenkotter, Huckin, & Ackerman, 1988) have generally treated enculturation as issue of transmission. This structuralist formulation treats disciplines as abstract, uniform bodies of knowledge that can be passed from expert members to novices (Prior, 1994). In contrast to this view, socio-historic theories (e.g., Bakhtin, 1981) view learning as concrete and historically situated and communities as diverse and differentiated.

Social-Interactive Theory

Writing is to be read. When one writes, one needs to establish a mutual frame of reference (i.e., "a temporarily shared social reality") between writer and reader (Nystrand, 1989, p.79). In order to communicate with the reader successfully, the skilled writer situates him/her by establishing topic, tone, and so on – metadiscoursal elements that in effect provide the reader with instructions on how to interpret the text. Skilled writing is "continuously constrained by the writer's sense of reciprocity with her readers" (p.78). The writer's purpose is constrained in a way by her reader's expectations of purposes. It is in just such matters that social and cognitive factors interact in composing. A given text is functional to the extent that it balances the reciprocal needs of the writer for expression and of the reader for comprehension. According to Nystrand (1989),

Communicative homeostasis is the normal condition of grammatical texts.... Texts are not just the result (product) of writing but also the medium of communication whose features are best understood...
for their capacity to bridge writer and reader interests and purposes. A social-interactive view of writing underscores the quintessential mutuality of written communication. (p.82)

Recent reflections on Vygotsky’s theory have challenged earlier translations of his work that represented the "zone of proximal development" as the dyadic scaffolding a generic expert provides for a generic novice, an interaction whose sole function is the transmission of conceptual knowledge. Minick, Stone, and Forman (1993) argue for a view of learning that is simultaneously more personal, interpersonal, and institutional.

Bakhtin's Socio-historic Theory

Bakhtin's socio-historic theory has influenced many researchers such as Herrington (1992) and Prior (1991, 1995). It is a theory grounded in the concrete utterances of particular people in particular situations rather than in formal abstract patterns of language. From Bakhtin's perspective, words are dynamic, negotiable spaces within which particular personal and social significations converge, clash, and co-exist. For Bakhtin,

The word in language is half someone else's. It becomes "one’s own" only when the speaker populates it with his own intentions, his own accent, when he appropriates the word, adapting it to his own, semantic and expressive intention. Prior to this moment of appropriation, the word does not exist in a neutral and impersonal language (it is not after all, out of a dictionary that the speaker gets his words!), but rather it exists in other people’s mouths, in other people's contexts, serving other people's intentions...

(pp.293-294)

In contrast to notions of self-expression and transmission, Bakhtin’s dialogic notion of ownership is grounded in an understanding that both the
person and the community are diverse, developing, and interpenetrated. Bakhtin’s notion of "authoritative" and "internally persuasive" discourses, emphasizing both the negotiable dynamics of the word and the ways such negotiations reflect and shape the development of the person, has offered a rich construct for the analysis of (teacher) response-(student) revision connections, and a useful way to reconceptualize the issues of ownership. "Authoritative discourse" can be defined as language that is associated with some form of social authority and is relatively closed, that is, "not well understood or integrated with the person’s consciousness" (Prior, 1995, p.298). On the other hand, the "internally persuasive word" is "half-ours and half-someone else’s" (Bakhtin, p.345); as such it is open, negotiable, and interactive. For Bakhtin, what is internally persuasive is the dynamic product of interactions between an active evolving person and a series of concrete experiences in social and natural worlds. Thus in Bakhtin’s socio-historic theory, academic writing can be viewed as the negotiation of the teacher’s authoritative and the student’s internally persuasive discourses, a central mechanism of disciplinary enculturation, as others' words and worlds are slowly interwoven into the evolving formation of a particular person.

**Socio-humanistic Theory**

Contrary to what social constructionists (Bartholomae and Bizzell) have said, the goal of the expressivists – to help students grow in their ability to understand their own experiences – is not compatible with learning disciplinary language. "Students do not learn very well unless they have an emotional connection. If they cannot relate their own lives to philosophy, their familiar languages to the new one, the papers they write will be no more than products of a mind game" (McCarthy, 1987). Peter Elbow (1973) believes that the work of writers must reflect their personal experiences. Good teaching is building a trusting community, a context that facilitates the
growth of the student writer. Some student writers need such a trusting environment in order to present their views; others need it in order to question their views. In the expressivist context, students are "empowered, not by suppressing their own voices to mimic the disciplinary language, but by struggling to use it for their own ends, by groping to interweave it with their familiar discourses."

A text on a particular topic always has "off-stage voices" for what has previously been written about that topic. Thus a social view of writing moves beyond the expressivist contention that the individual discovers the self through language and beyond the cognitivist position that an individual constructs reality through language. In a social view, any effort to write about the self or reality always comes in relation to previous texts.

A line of research taking a social view of composing develops from the tradition of ethnography. Ethnographic methodology in the 1970s and 1980s has been used to examine the immediate communities in which writers learn to write – the family and the classroom. In sum, writing processes are, "contextual rather than abstract, local rather than general, dynamic rather than invariant" (Faigley, 1986).

A substantial body of research examining the social processes of writing in an academic discourse community now exists in the sociology of science. This literature taken as a whole challenges the assumption that scientific texts contain autonomous presentations of facts; instead, the texts are "active social tools in the complex interactions of a research community" (Bazerman, 1988, p.3). Donald McCloskey (1983) says that "the scientific paper is, after all, a literary genre, with an actual author, an implied author, an implied reader, a history, and a form"(p.505).
IV. Conclusion

Writing theories have presented us writing teachers and researchers a better picture of the academic writing and influenced our teaching practices. An important outcome of writing research is the realization that writing must be treated simultaneously as a cognitive and social activity, and that these approaches may differ to a certain extent, but they are mutually reinforcing rather than incompatible. Given that we now have a promising theoretical base, it seems reasonable to reconceptualize writing (i.e., academic writing) as a social act of negotiating meaning through "dialogues" between the teacher-reader and the student-writer. From this social-cognitive perspective, teachers and students will find writing a more "meaningful" and effective mode of learning.

V. Reference Works cited


寫作理論與研究之回顧：
從「認知」到「社會認知」觀

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中文摘要

「寫作」，在大學及研究所之學術環境中，是一種常見的學習方式。但是很少老師與學生對「學術性寫作」有真正的瞭解。近年來，寫作研究與理論在國外蓬勃發展。本文主旨在介紹寫作理論，藉此提供寫作老師一些最新的觀念，希望有助於國內寫作教學的改進。

本文從「認知」與「社會」兩層面探討學術性寫作。「認知」理論主要討論作者個人內在的「認知過程」，其中包括「計劃」、「起稿」、「訂正」等過程。持「社會觀」者則認為學術性寫作是師生溝通、建造知識的工具，是社會性行為，深受寫作環境的影響。「社會觀」涵蓋以下學派：「社會認知觀」、「社會建構論」、「社會互動論」、「社會歷史論」與「社會人本論」。

綜合地說，「認知觀」與「社會觀」兩者並不互斥，而是互補。換言之，唯有同時從寫作的「認知」（作者個人的寫作過程）與「社會性」（作者與寫作環境的互動）探討，我們才可能對寫作有較完整的瞭解。

關鍵詞：學術性寫作、認知寫作過程、社會認知觀、社會建構論、社會互動論、社會歷史論、社會人本論

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