RESEARCH IN WRITING, PRESCHOOL THROUGH ELEMENTARY, 1984-2003

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Abstract   The focus of this article is the research literature in written composition from early childhood through the elementary years, typically the end of sixth grade. Some research prior to 1984 is discussed, particularly in topics that were not included in Hillocks (1986), such as emergent writing. The definition of "composition" has expanded over the last decade; thus, while focusing primarily on writing, this article pays attention to other modalities (e.g., relations between drawing and writing) and includes not only writing but also other mediating tools (e.g., drawing, talking, computers) that are used in or for composition.

Key words: writing research, literacy, elementary school

Chinese

《关于写作的研究，学前教育至小学教育，1984-2003》
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撮要

这篇文章的焦点是关于幼儿至小学阶段的写作研究文献，一般指至小学六年级为止。有些在1984 年前进行的研究也会被讨论，特别是那些不包括在Hillocks（1986）里的课题，例如写作萌发。过去十年，「写作」的定义得到扩展；所以，

本文的焦点初步集中在写作时，亦较关注其它写作形式（例如：绘画和写作之间的关系），以及包括其它可应用在写作里或协助写作的方法，例如：绘画、说话、计算机。
(Abstract translated into Chinese by Shek Kam Tse.)

French résumé Cet article porte sur les recherches relatives à la production écrite, depuis la prime enfance jusqu'à la fin de l'école primaire. Quelques travaux antérieurs à 1984 sont présentés, en particulier ceux qui portent sur des points non pris en compte par Hillocks (1986), comme les débuts de l'entrée dans l'écrit. La définition de " composition " s'est étendue au cours de la dernière décennie. Ainsi, cet article, tout en se centrant principalement sur la production écrite, s'intéresse à d'autres aspects (par exemple, les relations entre le dessin et l'écriture) et inclut non seulement l'écriture, mais aussi d'autres outils de médiation (par exemple, le dessin, le discours, les ordinateurs) utilisés dans ou pour la composition.
(Abstract translated into French by Laurence Pasa.)
Mots clefs: recherche en écriture, literacie, école primaire

Portuguese resumo. O objecto deste artigo é a literatura de investigação sobre a composição escrita desde a educação de infância até ao ensino básico, tipicamente o fim do 6º ano. É analisada alguma investigação anterior a 1984, em particular sobre aspectos que não são considerados por Hillocks (1986), tais como a escrita emergente. A definição de composição expandiu-se ao longo da última década. Assim, centrando-se essencialmente na escrita, este artigo aborda outras modalidades (por exemplo, relações entre o desenho e a escrita) e inclui não só a escrita mas também outra ferramentas mediadoras (por exemplo, o desenho, a conversa, os computadores) que são utilizadas na ou para a composição.
(Abstract translated into Portuguese by Paulo Feytor Pinto)
Palavras-chave: pesquisa em escrita, literacia, ensino básico

1. CHANGES IN THEORETICAL PERSPECTIVES AND FRAMEWORKS OVER THE LAST TWO DECADES

Four interrelated theoretical perspectives inform writing research in the preschool through elementary year period since publication of the Hillocks (1986) volume: constructivism, emergent literacy, the "social turn" (Gee, 1999), and "multiliteracies."

1.1 Constructivism

Children come to school with a range of prior knowledge, concepts, skills, attitudes, and beliefs that influence how they interpret and organize information, which in turn affects their abilities to reason, acquire new knowledge, and solve problems. Some studies of children's writing focus on cognitive aspects of writing, influenced to a great extent by the work of Piaget (1985, who viewed language as secondary to, and a reflection of, thought. In the mid-1980s a significant shift occurred as researchers of young children's writing began to heed the work of Vygotsky (1962, 1978), who argued that once language begins (at about the age of 2), language and thought are inextricable related. (Cole [1996] has revised Vygotsky's view, arguing that this relation begins with the child's first human contact.) An essential difference from Piaget's theory is that learning precedes development as more knowledgeable others mediate children's learning through social interaction in the *zone of proximal development.*

For the most part, cognitive and social constructivist perspectives are now seen as complementary, rather than competing explanations, contributing insights into

different dimensions of writing development. A *sociocognitive constructivist perspective* is based on the premise that writing is both a personal and social activity. While writing is determined to a great extent by the experiences and intentions of the individual writer, rather than being a biological, adaptation reaction to the environment, writing is better thought of as a purposeful and culturally meaningful activity that varies according to context. Furthermore, as children engage in cognitive processes in composing meaning, such as problem-solving and self-regulation, they draw on declarative, procedural, and genre knowledge learned in social contexts.

1.2 An Emergent Literacy Perspective

The youngest age discussed by Hillocks (1986) was first grade, which at the time was generally seen as "the beginning" of writing. As researchers began to rethink young children's pre-conventional literacy development, the beginnings of writing came to be seen as rooted in the early childhood years. This shift became known as an *emergent literacy perspective* (Teale & Sulzby, 1986), which holds that children are constructors of meaning, that literacy development takes place in social settings as children interact with adults and peers, and that literacy develops most fully in contexts that promote meaning and purpose in writing and reading.

1.3 The Social Turn

Since the 1980s, several traditions of research have contributed to and shaped the "social turn" (Gee, 1999), a movement away from a primarily cognitive or psychological orientation to a social perspective.

1.4 Activity theory

Vygotsky (1978) argued that language, writing, mathematics, and other sign systems significantly influence how people think and interact. Vygotsky felt that writing was especially important for its effects on thinking and that the effects of writing vary depending on the nature of the symbol systems in different cultures and the uses of writing in particular social contexts. Activity theory, arising from Vygotsky's work, positions the mind in society rather than in isolation. Activities are not ends in themselves but serve larger purposes.

1.4.1 Ethnographies of communication

Ethnographies of communication reflect the insights from anthropological and linguistic methods to the study of literacy. A key finding from this research, in particular Heath's (1983) ethnography of life in three communities in the Piedmont Carolinas, is that children from diverse backgrounds are socialized differently into ways of using oral and written language. Ethnographies of writing explore the ways in which children use writing as one of many symbolic systems to participate in community,

negotiate their social worlds, construct identity, and deal with social relationships and issues of power (Dyson, 1997).

1.4.2 Bakhtin's dialogism

Bakhtin (1979/1986) argued that all language is *dialogic* because understandings of words and how to use them are shaped by and developed through interactions with others. An important contribution of Bakhtin's work is his discussion of *genres*, structures that are embedded in and develop out of the various spheres of human activity. Genres provide a set of signals that enable a speaker/writer and listener/reader to interpret the particulars of a specific communicative interaction. Yet genres are sufficiently open-ended to allow for individual choice, creativity, and voice, so writing is very much an individual creative process as well as a social one.

1.4.3 New Literacy Studies

New Literacy Studies (NLS), building on sociolinguistic and anthropological theories, investigate literacy in out-of-school contexts, with a focus on distribution of and access to social power. A key concept in NLS is *Discourse*, "ways of behaving, interacting, valuing, thinking, believing, speaking, and often reading and writing that are accepted instantiations of particular roles (or 'types of people') by *specific groups of people* [...]. [Discourses] are, thus, always and everywhere *social* and products of social histories" (Gee, 1996, p. viii; emphasis in original).

1.5 Multiliteracies

Another key idea in NLS is the notion of *multiliteracies*, a term introduced by The New London Group (1996), to connote multiple media, hybrid text forms, and new social relations. There are four key ideas related to *multiliteracies*: a plurality of literacies (rather than a single, monolithic literacy), the use of multiple sign systems, the availability of hybrid text forms, and the development of new social relations, with an emphasis on the sociopolitical. Rather than as a generic set of skills, a multiliteracies perspective sees writing as variable, arising from, embedded in, and mutually constituting social contexts. Multiliteracies takes a sociopolitical stance, stressing the ways in which literacy practices are imbued with ideologies and power relations and are thus "infused with a critical literacy stance" (Pappas & Pettegrew, 1998, p. 42).

2. RESEARCH FINDINGS

This section presents research findings on preschool through elementary writing, including the emergence of writing, cognitive and sociocognitive dimensions of children's writing processes, and social and cultural aspects of writing. These categories recognize that literacy processes, even those that are considered to be cognitive, originate in social interaction and are acquired in contextualized activity (Vy-

gotsky, 1978), and that writing is best thought of as a set of culturally-based discursive practices rather than as merely a set of cognitive skills (Gover & Englert, 1998). Finally, research on the teaching of writing is presented.

2.1 The Emergence of Writing

When researchers and teachers use the terms emergent literacy or emergent writing, they are usually referring to children from infancy through kindergarten or first grade. Children's earliest writing is playful and interrelated with other forms of communication, especially talk and drawing (Dyson, 1986). Because children's earliest writing attempts integrate other sign systems such as drawing, emergent writing most often refers not only to written texts but other representational forms.

2.1.1   The nature of writing development

Luria (1929/1978), the first person to study young children's understanding of the symbolic nature of writing, identified four developmental stages: (1) undifferentiated-noninstrumental scribbles, which are not used as signs of any kind and reflect no awareness of the functions of graphic marks; (2) undifferentiated ostensive sign use, in which marks are used to point to particular content but are not true signs in the symbolic sense; (3) undifferentiated to differentiated transformation of sign-stimulus to sign-symbol; and (4) pictographic use of sign. The earliest studies of preschool children's writing in English, by Legrun (1932) and Hildreth (1936), document stages of development beginning with random scribbles, progressing to scribbles with horizontal and vertical characteristics, to consistent linearity, to structures that approximate real letters, and finally to conventional alphabetic forms.

Clay's (1975) research shows that while two-year-olds apparently scribble-write for the enjoyment of movement and creation of a visible object, somewhere between the ages of three and five, most children become aware that writing involves making marks purposefully. Harste, Woodward, and Burke (1984) demonstrate that young children growing up in cultures with writing systems other than English, such as Arabic and Hebrew, produce scribble writing that resembles the written language of their cultures. Some of the most important insights into emergent writing have come from case studies such as Bissex's (1980) longitudinal study of her son from ages five through ten.

One of the most important learning tasks for children is differentiating the unique aspects of written language (Sulzby, 1986). Dyson (1984) proposes that learning to write is like solving a puzzle, and that becoming a writer involves learning about perceptual features (i.e., what writing looks like), its symbolic nature (that writing is a system of signs), structural characteristics (e.g., elements of stories), discursive procedures (e.g., encoding), its sociocognitive nature (i.e., that writing must be able to be interpreted independently from the specific context in which it was written), and functions or purposes of writing.

Gradually, children develop an awareness of the relation between speech and symbol, first through the syllabic hypothesis, using one symbol to represent one syl-

lable, with no phonetic relation (Ferreiro, 1990), before developing an understanding of the alphabetic principle (that there is a relation between letters and speech sounds) (Chomsky, 1971; Read, 1971) and progressing through a series of developmental stages (e.g., invented spelling) toward conventional spelling (Beers & Henderson, 1977). Segmentation (into words and sentences) and punctuation develop in a similar way, moving through a series of approximations to conventional forms (Cazden, Cordeiro, & Giacobbe, 1985).

2.1.2   The development of written genres

The earliest research in children's written genre development focused on narrative, which has traditionally been seen as the most appropriate form for young children (Pappas, 1993). Applebee (1978) described how two basic processes, first centering and then chaining, produce increasingly mature narrative forms, from "heaps" to true narratives. Subsequent studies (e.g., Chapman, 1994) demonstrate that chaining and centering can occur at the same time in development. Children's narrative writing exhibits increasing cohesion and coherence as they progress through the elementary school (Spiegel & Fitzgerald, 1990).

Newkirk (1987) showed how centering and chaining apply in genres other than narrative. He demonstrated that children develop more complex non-narrative forms from the label (a one-word or one-sentence identification of a picture) and the list (a series of names, dates, facts, etc., usually not in sentence form). Chapman (1995) demonstrated that narrative and non-narrative development in a first-grade writing workshop are interrelated rather than discrete lines of development. Children's stories, for example, often emerge from labels or captions (non-narrative forms) accompanying their drawings. Langer's (1986) study of 8- to 14-year old writers found that new organizational structures arose from simpler patterns in limited contexts. With age and experience students' repertoires of organizational patterns increase and they become more able to use them as central organizers for longer pieces of writing.

Children construct their knowledge of written genres in response to texts embedded in their social worlds and actively appropriate genres from their literacy environments (Chapman, 1995). Elementary children can use their genre knowledge playfully and creatively, transforming traditional genres into popular culture genres, such as raps (Sipe, 1993). They can also use a variety of "classroom workplace" or "classroom community" genres, such as reading logs, records of attendance, club memberships, reminder notes, agendas, and so on (Chapman, 1999). One of the major debates about genre learning is whether, and to what degree, children benefit from instruction in genres related to academic disciplines, which Bakhtin (1979/1986) argued are removed from immediate social contexts and thus more difficult to learn.

2.2 Cognitive and Sociocognitive Dimensions of Children's Composing

From a cognitive perspective writing is a complex and recursive process that involves several subprocesses, for example: topic selection, planning, accessing prior knowledge, generating ideas, rehearsing, attending to spelling and handwriting, reading, organizing, editing, and revising. The most influential cognitive processing models over the past two decades were those developed by Hayes and Flower (1980) and Scardamalia and Bereiter (1986). In cognitive processing models, composing is often described as consisting of three phases – *planning, translating*, and *revision* – which operate in a recursive fashion. In the Flower and Hayes (1980) model, planning includes setting goals and generating and organizing ideas. Young writers tend to write what they retrieve from long-term memory, with little consideration for organization and goal-setting (Graham & Harris, 2000). The second phase, sentence generation or idea translation, places enormous cognitive and physical demands on young writers. The third phase, revision, which includes reorganizing, deleting, adding, and evaluating text, also places great demands on young writers.

Throughout the 1980s and 1990s, researchers working from a psychological perspective continued to focus on developing cognitive models to describe children's writing processes. Bereiter and Scardamalia (1987), for example, describe two types of cognitive processes, *knowledge-telling* and *knowledge-transforming*. In knowledge-telling, which is common in younger writers, writing flows from language acquired through everyday experience, and children proceed from one idea without an overall plan or having a sense of the composition as a purposeful whole. In knowledge-transforming, which is more typical of experts, writers transform their ideas through "a two-way interaction between continuously developing knowledge and continuously developing text" (p. 13).

Zimmerman and Riesemberg's (1997) model includes affect as an important factor in writing as a self-regulating process. Self-regulation strategies include goal setting, planning, information gathering, organizing, rehearsing, transforming, self-monitoring, self-evaluating, revising, and seeking assistance. Zimmerman and Riesemberg include three categories of processes that regulate writing: environmental, behavioral, and personal. Environmental processes regulate the physical or social context of writing, behavioral processes regulate overt motor processes, and personal processes regulate affective states and cognitive beliefs about writing. These processes interact as writers monitor, modify, abandon, or continue the strategies they are using.

2.2.1   Writing processes of young children: Preschool through primary

Children's use of writing within the context of play has been studied in the home (Bissex, 1980), in the preschool (Neuman & Roskos, 1989), in the kindergarten (Vukelich, 1993), and first grade (MacGillivray, 1994). Studies such as these show that children understand much about the functions and forms of writing long before their writing becomes conventional.

Dyson (1986) uses the metaphor of "symbol weaving" to describe the ways in which children draw on various symbol systems or media, particularly drawing and talking, in their writing. Children talk their way through writing events: before writing, during writing (as though they are thinking aloud), and after writing (rereading aloud what they have written) (MacGillivray 1994). They talk about the mechanics of writing (e.g., letter formation, spelling) as well as ideas (Chapman, 1994b; Cioffi, 1984). Bereiter and Scardamalia (1987) propose that talk helps young children monitor their writing processes because they write without planning, writing from one idea to the next with a "what's next" approach to writing. As children gain experience with writing, "evidence of planning and rehearsal of ideas prior to actual writing begins to appear" (Dahl & Farnan, 1998, p. 25) and talk before and during composing diminishes (Cioffi, 1984).

Primary children revise less often than older writers. With teacher support, some first grade children are able to make meaningful revisions to their texts (Fitzgerald & Stamm, 1992). By second grade they can use content and genre knowledge (Perez, 2001) and are able to revise for surface and semantic errors (Cameron, Edmunds, Wigmore, Hunt, & Linton, 1997) but their revisions tend to focus more on mechanics than on meaning, and meaning-based revisions tend to involve only small units of text (Fitzgerald, 1987). As children progress through the primary grades and beyond, they become less focused on mechanics and more on content (Dahl & Farnan, 1998).

With greater recognition of the role of children's social worlds on cognition, self-regulation is now seen as a result of internalized dialogue, or appropriation, from one's social world (Burns, 2001). Young children show high levels of self-regulation during composing in settings that encourage it (Cameron, Hunt, & Linton, 1996). Perry's (1998) study of self-regulation in writing in grades 2 and 3 found that children in high self-regulated learning (SRL) classrooms, in comparison to low SRL classrooms, commented more often on meaning-related aspects of writing and the intrinsic value of their writing. Low-achieving writers in the high-SRL classrooms were encouraged by improvements in their writing and believed that they were receiving support that would help them become successful writers. Low-achieving students in the low-SRL classrooms, however, made statements reflecting perceptions of low ability and discouragement.

2.2.2   *Writing processes of children in the intermediate grades*

While the last two decades have seen great interest in the writing of preschool and primary children, there have been comparatively fewer studies of writing in the intermediate grades. Calkins (1994) demonstrates that intermediate writers gradually gain awareness and control of their writing processes, drawing on multiple sources of information as they write, including their own experiences, repertoires of knowledge, and social worlds. Whereas younger children focus to a great degree on the written code, intermediate writers begin to focus more on meaning and making connections among ideas (Langer, 1986).

As students progress through the intermediate grades, they become more strategic in generating ideas and planning, constructing meaning through linking ideas, monitoring the development of ideas in their writing, and reviewing and revising for meaning (Langer 1986). In an analysis of prewriting planning notes of students in grades 4 and 6, Scardamalia and Bereiter (1987) found that in fourth and sixth grades, students' planning and drafting processes were similar. In fourth grade students generated complete sentences that they then incorporated into their drafts. In sixth grade, however, students generated lists of ideas during prewriting, which they then worked into their texts. In the intermediate grades young writers become more aware of the strategies they use in composing and are more self-regulated writers (Langer, 1986). Their talk during writing shows awareness of both content (e.g., what to include) and surface features (Langer 1986).

Intermediate writers are more able to revise than primary students, but they find it more difficult to revise their own writing than texts written by others (Cameron et al., 1997). Fifth graders in Nistler's (1990) study displayed a broader sense of audience that first and third graders, showed balance in revising for mechanics and meaning, demonstrated less concern for the physical appearance of their work, and exhibited greater awareness of multiple stages in the composing process. Beal (1993) argues that a key problem in the revision process is that writers need to change their stance toward texts. Instead of making assumptions and inferences in order to comprehend a text, reading to revise entails noticing gaps, inconsistencies, and potential sources of confusion. She notes the inability to do the latter is "the result of cognitive limitations that it make it hard for them [elementary children] to view the text with a detached eye and to recognize that it does not really represent their meaning fully or accurately" (p. 450).

2.3 Social and Cultural Dimensions of Children's Writing

A sociocultural perspective on writing is informed by Bakhtin's (1979/1986) theories about the nature of language and learning. Dyson has been particularly influential in infusing Bakhtin's ideas into research with young children and re-envisioning children's writing as a sociocultural process. An important aspect of learning to write is constructing one's identity as a writer, not in a generic sense but as "a boy or girl, to a person of a particular ages, ethnicity, race, class, religion, and on and on" (Dyson, 1995, p. 12).

2.3.1   Writing in the classroom community

Social worlds – cultures and communities— provide resources that writers draw upon when they construct and communicate meaning. These resources include people and the things they create, such as ways of thinking, communicating, and representing ideas; sign systems (e.g., alphabetic writing); texts of different kinds (e.g., literature, popular media texts); and participation structures. The classroom is a particular community that defines literacy (genres, values, and conventions for participation) and provides models and demonstrations of a diverse array of functions and

forms of writing that shape children's writing processes (Rowe, 1994), genres (Chapman, 1995; Kamler, 1992), content (Rowe, 1994), and conceptions of gender roles (Kamler, 1992). Children appropriate from their social contexts both cognitive aspects of writing and social conventions for participation (McCarthey, 1994).

Studies of writing in preschool (Rowe, 1994), kindergarten (Phinney, 1998; Wiseman, 2003), and primary classrooms (Dyson, 1992) reveal that young children use writing as a vehicle for social engagement and are developing understandings about social purposes for writing. The children in MacGillivray's (1994) first grade study, for example, used writing to resolve peer issues and collaborate with peers. Children experiment with writing and explore ways of using a variety of discourse forms for different social purposes regardless of the specific approach to instruction (McIntyre & Freppon, 1994). Nevertheless, teachers cultivate, establish, and maintain particular uses of and approaches to writing within the classroom.

2.3.2 Literary, popular, and peer cultures

Children draw on their cultures' uses of literacy as resources for writing, including an array of literature, popular culture, and media texts. First grade children in Dahl and Freppon's (1997) study derived topics, character ideas, and structures for writing from their reading experiences and sometimes copied from their favorite books. Children also draw on popular culture as a resource for writing, appropriating media as "textual toys" (Dyson, 2001). Dyson's (1997, 2001) case studies document how children recontextualize aspects of popular culture texts such as songs, movies, cartoons, and sports media shows in composing their own multimedia texts.

Peer culture also plays a significant role in children's development as writers, beginning in the preschool years (Rowe, 1994). While peers may play a positive, supportive role in writing (Labbo, 1996; Rowe, 1994), social pressures from classmates sometimes limit children's voice and writing identity (Phinney, 1998). Wiseman's (2003) study of kindergarten writing and Chapman's (1994b) study of a kindergarten-second grade multiage classroom demonstrate how classmates initiate, reinforce, and delimit particular writing practices or genres; scaffold each others' writing experiences; and judge particular topics as acceptable or unacceptable.

2.3.3 Social interaction and writing

A number of studies document the ways in which peer interactions support elementary students' writing. Swafford, Akrofi, Rogers, and Alexander (1999), for example, demonstrated how second and third grade children assisted each other in reading and writing informational texts. More able students provided three kinds of support for peers: technical support (e.g., mechanics, sequencing), social support (e.g., listening to, encouraging, collaborative problem solving), and content support (e.g., negotiating textual meaning, verifying answers). Dahl's (1988) case study supports the use of peer revision conferences. She found that the fourth graders talked about revising for clarity and focus, changing titles and sequences of events or information, and that subsequently, 46% of suggestions made in peer conferences resulted in

revisions. Similarly, peer feedback in a sixth grade study improved the degree and quality of revision and quality of writing (Olson, 1990).

A few studies have shown the benefits of older and younger children writing collaboratively. In an experimental study of emergent writers paired with older children experiencing difficulties with writing, Nixon and Topping (2001) found greater improvements for emergent writers who experienced the paired writing than those who did not. A study of interactions among children writing in a multi-age K-2 classroom (Chapman, 1994b) found that the older (grade two) children assisted the younger children with many aspects of writing, particularly spelling and letter formation. The second graders also acted as teachers, socializing the younger ones into classroom routines and "how to do writing" in their classroom.

3. RESEARCH ON THE TEACHING OF WRITING

Over the past two decades research on the teaching of writing has examined different approaches to teaching writing, ways of improving student writing (especially for struggling writers), and the impact of new technologies on writing, particularly the computer.

3.1 Process Approaches to Writing

In the decade following the publication of Hillocks (1986), there was a surge of interest in using a more strategic, process-oriented approach to writing instruction in the elementary school. Recall that Hillocks' meta-analysis revealed that the *presentational* mode, characterized by teacher-led discussions, lectures, and written feedback on the qualities of effective writing was the least effective approach to writing. The *natural process* mode, emphasizing free writing on self-selected topics, peer and teacher feedback, and indirect rather than explicit instruction was more effective than the presentational mode, but less effective than the *environmental* mode. Like the natural process mode, the environmental mode also used peer group activities, but ones characterized by "highly structured problem-solving tasks which involve students in specific strategies parallel to those they will encounter in their writing" (p. 194).

Sadoski, Wilson, and Norton (1997) carried out a study in 16 classrooms in various school districts in Texas to investigate the impact of the features of instruction Hillocks (1986) referred to as the environmental mode, using factor analysis to examine the general dimensions of the environmental approach rather than individual variables. Sadoski et al. found that writing in the elementary grades was enhanced when teachers allowed considerable time for writing; encouraged students to produce more text; exposed students to well-written literature; provided opportunities for prewriting, inquiry, and freewriting (rather than using models); allowed teacher and peer conferencing; and used criteria in instruction and assessment. The researchers concluded that "the positive effect of a combination of instructional practices interpretable as the environmental mode was supported" (p. 143).

Teacher feedback has a positive effect on children's confidence, strategy development, and performance (Skinner, Wellborn, & Connell, 1990). Specific and explicit feedback has been found to be important for young writers because it helps them progress from where they are to where to where they would like to be and provides them with information to help them achieve their goals (Schutz, 1993). Children respond positively to specific suggestions to help them improve their writing because it enhances their feelings of control (Straub, 1996).

3.2 Scaffolding and Explicit Instruction

Building on Vygotsky's (1978) notion of the zone of proximal development, educators use the metaphor of a scaffold to describe the ways in which adults' interactions foster children's learning and development, enabling them to carry out tasks they are not able to do independently. Much of the research on scaffolding (e.g., modeling, demonstrating, prompting, questioning, and joint construction of text) has been conducted with younger children. Kamberelis and Bovino (1999) investigating the role of scaffolding in kindergarten-through second graders' learning of narrative and informational genres, found that most children, especially the younger ones, produced more well-formed texts in the scaffolded condition than the non-scaffolded condition. Wollman-Bonilla and Werchaldo (1999) examined the impact of scaffolding and explicit instruction on children's writing in response to literature, concluding that "repeated modeling, with student participation in constructing the models, may be a powerful instructional tool; explicit instruction may not be as essential as other researchers suggest" (Wollman-Bonilla, 2000, p. 58).

There is evidence that explicit instruction in revising strategies enhances intermediate students' knowledge of revision and also increases their efforts at revising (Fitzgerald, 1987). Writing strategy training (e.g., Graham & Harris, 1989, 1993), building efficacy for using strategies (Schunk & Zimmerman, 1997), and strategy instruction combined with goal setting (Graham, MacArthur, & Schwartz, 1995) have all been shown to enhance both writing quality and efficacy. Explicit strategy instruction has been found to be particularly helpful for struggling writers (Graham, et al., 1995) and for students with learning disabilities who tend to have problems with planning, evaluating, and writing, which often lead to negative attitudes toward writing (Graham, MacArthur, Schwartz, & Page-Voth, 1992).

3.3 Writing Tasks

Writing is enhanced when tasks are motivating, interesting, and appropriately challenging. Children benefit from engaging in authentic writing tasks that involve them in the immediate uses of writing for enjoyment and communication, rather than as skills to be learned for some unspecified future use (Hiebert, 1994). One-size-fits-all writing tasks tend to focus solely on technique and ignore the communicative purpose of writing. Purcell-Gates et al.'s (2003) large longitudinal study of writing integrated with hands-on science activities found that the degree of authenticity was a

statistically significant predictor of student growth for informational writing, verbal features.

Children write more on self-selected topics than assigned topics (Meichenbaum & Biemiller, 1992; Scardamalia & Bereiter, 1986). They have significantly more content knowledge about topics they want to write about than assigned topics (Gradwohl & Schumacher, 1989). Children also sustain engagement longer in open-ended writing tasks than closed tasks and are more persistent when they experience difficulties (Turner, 1993). Publishing writing to be read by a known audience—for example, a classroom newspaper, which would be read by peers and families—increases student engagement and motivates them to engage in revision needed to enhance the clarity of their writing (Alber, 1999). Students are also motivated by cooperative writing tasks that help them learn different strategies and styles from each other (McCutcheon, 1988)

Engagement is an essential component in fostering a positive emotional environment. It is better to engage students in challenging writing tasks and provide them with the scaffolding and support they need to be successful than to assign simple tasks they can do without effort. Students find complex learning activities more interesting and challenging (Miller & Meece, 1999), which leads to greater motivation. Appropriately challenging tasks create interest, allow for self-improvement, and afford children opportunities to control their own learning (Turner & Paris, 1995). Open-ended writing tasks are particularly important because they allow for learner variability to promote meaning-making, engagement and control and foster feelings of competence and efficacy (Turner & Paris, 1995).

3.4 Classroom Contexts

Several studies have compared the effects of different types of classroom contexts on children's writing. Dahl and Freppon (1997), for example, contrasted writing in skills-based and whole language classrooms in kindergarten and first grade. While children in both types of classrooms were concerned about accuracy, children who experienced difficulty in skills-based classrooms tended to be passive, whereas children in whole language classrooms were more persistent. There were strong differences in children's conceptions of themselves as writers in the two types of classrooms. Dahl and Freppon also noted very different kinds of writing: Children in whole language classrooms wrote sentence-, paragraph-, and story-level texts, while the "writing" in the skills-based classrooms consisted mostly of workbook assignments, sentence completion, fill-in-the-blanks, copying activities, and a few stories.

In a comparative study of writing in "traditional" kindergarten classrooms and more "child centered" classrooms, Blazer (1986) found that there was more talk accompanying the children's writing in the child-centered classrooms. Rasinski and DeFord (1986) used a questionnaire to assess third and fourth graders' attitudes toward writing and purposes for writing in informal and traditional classrooms. Students in the informal classrooms had generally more favorable attitudes toward writing and were more internally motivated to write than students in the traditional classrooms.

3.5 Technology and Writing

With increasing use of technology, children are immersed in symbol systems such as icons and other visual and multi-media images that go beyond oral language and print. Young children who have opportunities to work and play with classroom computers become aware that the computer is a communicative tool (Labbo, 1996; Labbo, Reinking, & McKenna, 1995). Research findings regarding differences in length and quality of compositions when using the computer in comparison to writing with paper and pencil are mixed. Cochran-Smith (1991) and Nichols (1996) found that compositions were slightly longer with computers, whereas Snyder (1993) found no differences. Schrader (1990) and Owston and Wideman (1997) found word-processed compositions to be of higher quality, while Nichols (1996) found no differences in writing quality even though compositions were longer. Snyder's (1993) study suggests that genre—narrative, report, or argument—has a greater impact on composing processes than the writing tool. Snyder observed that writing with the computer improved the quality of argument and reports but not narratives.

Technology can assist children in a number of ways. Daiute (1986) found that word processing can assist in reducing the cognitive demands related to some of the basic tasks in writing, thus allowing them to focus on the higher level demands of revision. Some research has shown that word processing can remove some of the difficulties young children encounter when they write by hand (Chang & Osguthorpe, 1990). On the other hand, Nuvoli's (2000) research into the use of a word processor to improve primary children's writing and revising found that children had greater difficulty drafting their texts with computers than with handwriting. Computer programs that provide prompts assist young writers in being more strategic (Cochran-Smith, 1991; Daiute, 1986; Jones, 1994). Multimedia composing programs have been shown to help children who often have difficulty with writing (Daiute &d Morse, 1993).

Cochran-Smith, Paris, and Kahn's (1991) three-year ethnographic study of writing with word processors in kindergarten through fourth grade classrooms, and a combined ethnographic and quantitative study in Australia by Snyder (1993), examined aspects of the classroom writing culture, writing processes, developmental issues, and overall contributions of word processors for children. Both studies found that the teacher's training, theoretical perspective, and view of the teacher's role were critical factors. These findings were supported by Canadian studies by Miller and Olson (1994) and Yau (1991).

4.   CONCLUSIONS AND IMPLICATIONS

Research in composition from 1984-2003 provides evidence that children's writing in the preschool and elementary years is complex and multidimensional, and thus no single instructional approach is appropriate for all contexts or purposes. Yet there is a convergence of evidence that children's writing is enhanced through:

Addressing cognitive and social dimensions of writing rather than emphasizing one or the other. Young writers need to develop effective writing processes and strategies that enable them to use writing for an array of personal and social processes. They also need opportunities to learn various functions and forms of writing long before they can write conventionally, beginning in the preschool years.

Creating language-and literacy-rich learning environments. Children need opportunities to engage with quality literature through listening, reading, discussing, and responding promote children's overall language and literacy growth as well as their writing development. Children also benefit from opportunities to use writing to construct knowledge about themselves and their physical and social worlds.

Providing supportive, encouraging, and positive learning environments. Young writers need freedom to venture beyond what they can do easily and to take risks in their learning without fear of reprisal when they make errors. Children benefit when educators and policy makers view errors as integral to learning and as signs of growth. Positive feedback, together with specific suggestions and support, foster children's growth towards writing with competence and confidence.

Establishing participation structures that encourage social interaction. Children need opportunities to share ideas, collaborate, and respond to each other's writing. They also learn to write through demonstrations, modeling, and scaffolding by adults and more able peers. Children benefit most when educators and policy makers are sensitive to political and ideological aspects of learning and issues of participation, voice, identity, and equality of access for all children.

Allowing connections to children's lives within and beyond the classroom. Motivation for writing comes in part from opportunities to make connections with one's own interests, ideas, and feelings. Young writers benefit from opportunities to draw from their peer and popular cultures, which are integral to their emotional and social worlds. It is important to engage children in writing that is personally meaningful and to value different functions and genres for what they contribute to children's lives.

Situating writing experiences within the larger context of the classroom. Writing is situated when it is an integral and purposeful part of the various spheres of activity in the classroom. Classrooms provide many opportunities for "community" or "workplace" writing, arising out of situations where it is necessary and relevant, to accomplish particular ends, and part of genuine communication.

Emphasizing the communicative purposes of writing within different situational contexts. Writing is not a generic process, but a way of communicating within specific contexts and spheres of activity. Each curriculum area provides children with con-

texts for learning discipline-based ways of thinking, representing, and communicating ideas. Genres are cognitive tools and social actions rather than merely text types. Young writers need opportunities to learn an array of genres with the realization that textual features are important not as ends in themselves but as vehicles to allow readers and writers to communicate effectively. Emphasizing the communicative nature of writing fosters children's audience awareness and self regulation.

Providing writing tasks that are authentic and appropriately challenging. Writing is fostered through engagement in tasks that are used for a purpose other than simply learning to write and for an audience other than the teacher as evaluator. Appropriately challenging tasks—those that can be accomplished through reasonable effort—foster motivation, interest, desire for self-improvement, and feelings of control. Open-ended writing tasks are particularly important because they allow children of varying levels of ability to be successful and to develop competence and confidence in themselves as writers.

Enabling opportunities to play with and explore multiple ways of composing, new literacies, new technologies and multi-media. Learning to write is part of a larger process of meaning making through multiple sign systems. All children need opportunities to explore and experiment with composing using a variety of media and tools for writing as well as new and emerging literacy practices and genres.

Integrating instruction with the processes of writing. Young writers, especially those who struggle with writing, benefit from explicit strategy instruction integrated within a process approach to writing. Similarly, directing attention to textual features can help children develop "genre awareness." Process and product need to be seen as complementary dimensions of writing. Awareness of both process and product fosters children's development as self-regulated writers.

Teaching with flexibility and variability rather than "one-size-fits-all" instruction. Children and writing are complex and multidimensional and thus generic or rigid prewrite-write-rewrite approaches to instruction are not warranted. Young writers benefit from opportunities to choose their writing topics and the forms their writing may take, at least some of the time. They also benefit from instruction that addresses the specific writing situation and task, builds on their individual strengths and interests, and meets their learning needs.

4.1 Recommendations for Future Research and Theory Building

While research over the last two decades has made important contributions to understanding writers and writing in the preschool and elementary years, there is still much to be learned. Although the last twenty years have provided many insights into young children's writing, intermediate-age writers have received relatively little attention. Researchers thus need to pay greater attention to children in this age

group. There is also a need for more longitudinal studies that examine writing within particular contexts. Research is needed on writing in the content areas at the elementary level, especially to investigate writing in relation to instruction and curricular contexts of the classroom, and the influences of context, task, and genre on cognitive dimensions of children's writing processes.

Another area requiring attention is the social and cultural contexts of classrooms and how they influence children's writing. More research is needed on issues of gender and culture in relation to children's writing and their development as writers. Research in the preschool and elementary years has focused for the most part on school contexts. It is important also to investigate preschool and elementary children's writing in non-academic settings and out-of-school contexts.

As we move further into the 21st Century, researchers need to continue to explore new literacies, multiliteracies, new technologies, and new genres. It is important to learn more about the cognitive demands of new literacies and new technologies and how technology transforms cognitive and social dimensions of children's writing processes.

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