The ambiguity in the title of this Endnote is intentional. This is a special issue on deafness and literacy, and the intent here is to discuss a few “special literacy issues” relative to deaf and hard-of-hearing students. The major objectives are as follows: (1) to describe briefly a broad perspective on reading and writing, that is, the literacy perspective; (2) to apply this perspective to one major, contentious reading component—word identification; and (3) to provide suggestions for further research and instructional efforts with deaf and hard-of-hearing students. Without oversimplifying, it is possible to proffer salient highlights of the literacy perspective, including its major positions: cognitive information processing, naturalism, and social constructivism. It is argued that adherence to only one of these positions may not advance our understanding of the literacy difficulties of deaf and hard-of-hearing students. In addition, a fixation on any one position may cause considerable confusion with respect to interpreting and applying the research findings associated with word identification. In essence, the argument will be that these three positions should not be construed as an either-or situation; rather, there is, or should be, strong reciprocal relations among them.

The Literacy Perspective

All of the articles in this special issue can be placed within the literacy perspective, also known as the reading-comprehension view. That is, the major focus of reading-comprehension theorists and researchers is on either the development or improvement of literacy (i.e., reading and writing) skills in English as a first or second language (e.g., see discussions in McCarthy & Raphael, 1992; Paul, 1998). Within this broad perspective, there is an implicit assumption that literacy skills are critical for success in school and society. On the other hand, illiteracy is often associated with disenfranchisement, poverty, and other societal ills (e.g., Olson, 1989; Olson & Torrance, 1991).

Perhaps, the strongest influences of the literacy perspective in society and in education can be seen in its purported effects on the development of thought (cognition) and in the differences between script literacy (print, written, or text-based) and orality (i.e., the use of speech and/or signs in a conversation-based mode). One assumption has been that literacy, particularly writing, has had a profound influence on the forms of consciousness (ways of thinking, knowing, etc.) most often associated with the modernized, Western world (Feldman, 1991). Succinctly stated, with the invention of writing and, subsequently, the printing press, there now exists a separation of the “text” and “reader’s interpretation,” which permitted a discussion of the “meanings” of text to be manifested by the vari-
ous interpretations of the readers. In other words, the text contains information, which is separate from a reader's comprehension and interpretation of it. More important, the encapture of text permitted individuals to engage in a deeper, more rational and critical reflection on and organization of information. Consequently, it is argued that Western thought is characterized by highly abstract, logical, complex theories and models, which may be quite different from those of current cultures that do not possess written literatures or the printed word and from those of preliterate cultures that depended on orality or oral discourses (Denny, 1991; Feldman, 1991).

In educational fields and in Western societies, it is not uncommon to find proponents who believe that (1) literate thought (i.e., the ability to think creatively, critically, and rationally) is pervasively dependent on the development of text-based or script literacy skills and (2) the existence of script literacy skills (reading and writing) is critical for participation in a scientific, technological society such as the United States (e.g., see discussions in Olson, 1989; Paul, 1998). With this mindset, it is understandable that high school diplomas and college or university degrees are mostly granted to individuals who can, at least, demonstrate competency in knowledge in the various content areas at a certain literacy level. Indeed, a good deal of the current controversy on high-school proficiency tests revolves around the "literacy" level of the tests, which may vary across states from the ninth or tenth grade to the twelfth grade level.

With the focus on developing reading and writing skills, the literacy perspective can be further divided into three schools of thought: cognitive information processing, naturalism, and social constructivism (McCarthey & Raphael, 1992; Paul, 1998). Much of the research on literacy and deafness, as exemplified by the articles in this Special Issue, has been conducted within the purview of cognitive information processing and, less frequently, naturalism. There has been very little research within the social constructivist framework. This pattern is similar to that which exists in the larger field of literacy as it relates to hearing children (e.g., Antonacci & Hedley, 1994; McCarthey & Raphael, 1992; Paul, 1998).

**Brief Critique of the Literacy Perspective**

As might be expected, none of the three schools mentioned above provides a comprehensive picture of literacy acquisition, including the acquisition of reading and writing in students who are deaf and hard of hearing (e.g., McCarthey & Raphael, 1992; Paul, 1998). Each school, with its paradigmatic approach, has advanced our understanding of literacy; however, there has been a growing call for multidisciplinary or transdisciplinary approaches (e.g., Beach, 1994; Weaver, 1994), even though such approaches seem to be poorly articulated or formulated at present (Clay, 1994).

There has been a substantial amount of attention devoted to studying the effects of various cognitive subprocesses and memory, in particular, on reading tasks. One of the most common foci has been on the relationship between short-term memory and reading comprehension (e.g., see reviews in McCarthey & Raphael, 1992; Paul, 1998). Other areas of inquiry include the study of text-based features (e.g., letters, words, syntax), reader-based characteristics (e.g., development of a schema or prior knowledge "frames," the effects of motivation or interest on comprehension), or the interactions between text-based and reader-based variables (e.g., metacognitive skills such as monitoring or evaluating comprehension). With respect to the notion of interaction, for example, many cognitive information processing proponents argue that there is a strong reciprocal relationship between the features of the text and the characteristics of the reader. In other words, reading is an interactive process in which readers utilize the information in the text in conjunction with the information in their heads to construct a model of what the text means. The reader’s interpretation should match the author’s intention, which can be related by the author or by individuals who are familiar with the topic. The development and, subsequently, the improvement of literacy skills depend on understanding these three separate components: the features of the text, the characteristics of the reader, and the interactions between the text and the reader.

The major assumption of the naturalistic position is that the individual is mainly responsible for constructing his or her own knowledge, and this process...
proceeds through developmental stages. The most well-known rendition of this position, especially in the field of deafness, has been the psycholinguistic-transactional model of Goodman (e.g., 1985), which has been popularly termed the whole-language approach. With such a predominant individual-centered focus, the teacher is viewed as a facilitator or catalyst and plays a very small—albeit important—role in the development of literacy skills. As a result, direct teaching of lower-level skills (e.g., word identification, etc.) and sometimes higher-level skills (e.g., answering questions) is, or should be, minimized. The individual reader must apply the cumulative, expanding knowledge (e.g., language and culture) that exists in his or her head to make "sense" of the text.

Naturalistic proponents argue that reading is a transactional process, not an interactive one involving separate components such as a text and a reader. Within the transactional framework, the reader and the text are bound together as part of one process. This meaning-making process is considered to be "wholistic" and reader-driven. In addition, there is no one main interpretation or meaning in the text itself (e.g., the intention of the author as conveyed by teachers and other experts). Meaning resides in the self (e.g., the reader), and all events and things associated with the outside world need to be interpreted by the individual; that is, it is a subjective interpretation that varies from person to person.

The major tools for interpretation are speech (or signs) and written language. In essence, it is argued that language is a natural part of the world; language is critical for receiving, expressing, and interpreting information. The naturalistic position has been utilized predominantly to support ASL-English bilingual programs for deaf children and adolescents (Paul, 1998; Paul & Quigley, 1994).

The social-constructivist view has been considered a compromise between the objective tenets of cognitive information processing and the subjective ones of the naturalistic position. Despite limited research in this area, the position does offer two important considerations for future researchers. First, meaning-making in literacy should be considered within the classroom milieu. That is, meaning-making is a social process, which involves not only the reader/writer, but also his or her peers and the teacher, as a mature reader/writer. Second, as an adult, the teacher plays an important role as facilitator/catalyst. There are many manifestations of this role; however, the one highlighted here is that the teacher is mainly responsible for ensuring that a wide variety of interpretations—including mainstream and prominent ones—are available for and accessible to readers/writers in the meaning-making process.

One of the major research tools of the three schools of thought—albeit mostly used by cognitive information processing adherents—is to compare “good” readers/writers and “poor” readers/writers or, in other words, to come to an understanding of what good readers/writers do. This approach has provided support—mostly contentious—for the assumption that English literacy acquisition, for example, is developmentally similar for all readers/writers, including second-language and deaf individuals who are learning English as a first or second language. In general, it is argued that all readers/writers of English proceed through developmental stages, produce errors, and utilize strategies that are essentially similar to those reported for individuals learning to read and write in English as a first language (e.g., Grabe, 1988, 1991; Hanson, 1989, 1991; Hayes & Arnold, 1992; King, 1981; King & Quigley, 1985; McLaughlin, 1987). There are, of course, individual variations; however, the underlying processes are considered to be basically similar. Despite differences and acrimonious debates among the proponents of the various schools of thought, we have gained a better understanding of skills that novice or poor readers/writers lack, based on the research on good readers/writers.

Even with the preponderance of empirical evidence, we still have a very limited understanding of the manner in which novice or poor readers/writers become more skilled. For example, although we seem to know much about the word identification (e.g., decoding) and comprehension (e.g., prior knowledge, metacognition) skills of good readers, it is not clear (1) whether most of these skills were developed during the process of reading (i.e., which came first, the skills or reading ability?) and (2) how much or what skills are essentially critical for the reading acquisition process. In addition, as vehemently argued by Stanovich (1986), there might be a “critical” or “optimal” period for de-
veloping reading ability due to what is called the “Matthew effect.” This “effect” is interpreted mainly as the “rich get richer”—that is, good readers are bound to become better and more advanced readers because of their ability to read widely and voraciously. Conversely, a secondary interpretation is that the “poor stay the same or become poorer.” That is, poor readers do not read extensively and cannot experience much growth solely by engaging in print- or script-related tasks. In addition, as poor readers advance in age, the more difficult it is to improve their reading ability and the greater the lag between their achievement levels and those of good readers.

Stanovich’s remarks seem to provide support for the assertion that an equal amount of emphasis should be placed on the development of “orality” (conversation-based language) so as not to impede the typical cognitive and language development of deaf and hard-of-hearing students. Orality might support the reading/writing acquisition process; however, its main value lies in the development of literate thought, the ability to think creatively, reflectively, and rationally, especially in the conversation-based mode such as speech and/or signs.

In my view, one of the major issues in literacy and deafness concerns the implications of research findings from the literacy perspective on the importance of word identification in the reading process (e.g., Paul, 1998). This has led to several either-or dichotomies such as to teach or not to teach word identification and phonics versus the whole word (sight) approach. Some scholars, including those who advocate ASL/English bilingual programs, seem to favor the perception that reading is primarily a “visual” process (i.e., mostly orthographic) in which deaf students can access words and larger structures (e.g., syntax) and, subsequently, understand their meanings (i.e., a semantic process) without the use of a phonological “recoding” or “mediating” process (e.g., Israelite, Ewoldt, & Hoffmeister, 1992; Johnson, Liddell, & Ething, 1989; Neuroth-Gimbrone & Logiodice, 1992; Strong, 1988). That is, there is little or no need for deaf students to be taught or even to apply letter-sound relationships, which requires, at least, the integration of phonological and morphological knowledge and orthography (e.g., graphemes, spelling, etc.). In general, there is the perception that deaf students can proceed directly from “print” (i.e., letters, words, phrases, sentences) to meaning.

Word Identification: The Continuing Debate

There is a great need for research on the word identification skills and processes of deaf and hard-of-hearing students. A distinction should be made, however, between skills and processes. Typically word identification skills refers to strategies that students might use to identify a word (i.e., decoding, recognizing, etc.). In this category are phonics, structural analysis, syllable analysis, and the use of context cues (Adams, 1990; Ehri, 1991). Word identification skills/strategies used in the classroom might be based on our understanding of the manner in which a word is processed in the mind of the reader.

In general, the processing of words refers to lexical access. Ehri (1991) states:

When people read words by sight or lexical access, they utilize information that is remembered about the words from previous experiences reading these words. Upon seeing the spellings, readers access the identities of the words in memory. These identities include the word’s pronunciations, its meaning, its syntactic identity . . . and its orthographic identity (i.e., information remembered about its conventional spelling). (p. 384)

With respect to the three schools of thought in the literacy perspective, there are numerous disagreements on the nature and the interpretation of the retrieval routes for accessing words from memory. A number of hypotheses have been offered, for example, phonological, morphological, semantic, visual (i.e., orthographic), and dual-access (phonological and orthographic) (Adams, 1990; Ehri, 1991). Nevertheless, differences within the literacy perspective notwithstanding, some have argued (e.g., Adams, 1990; Paul, 1998) that perhaps none of the hypotheses is completely right or completely wrong. Furthermore, there is an emerging consensus that word identification involves, at least for hearing students, both visual processing and a phonological translation. These two entities are not independent; rather, they are “synergistic parts of the same process” (Adams, 1990, p. 105).
Based on the above discussion, theorists and researchers within the three schools of thought would be remiss if they neglected to consider the role of both phonology and orthography in the reading acquisition process of deaf and hard-of-hearing students. To use an analogy, the same would be true for educators of deaf students if they believe, for example, that a sight word approach (i.e., meaning emphasis) is much more important and preferable than letter-sound relations (i.e., code emphasis). Based on a research synthesis on hearing students, Ehri (1991) has argued that “sight word reading is not necessarily a rote memorization process that ignores letter-sound relations (p. 383). In fact, “evidence suggests that phonological recoding skill is not a mere facilitator but a necessity for reading words by sight” (p. 402). If reading is basically the same for all students, then Ehri’s remarks should be applicable to deaf and hard-of-hearing students. This, of course, should be validated by empirical research, using the same research paradigms, or some variations, that have been used with hearing students (e.g., for a description, see Adams, 1990).

In light of the above discussion, further research on deaf and hard-of-hearing students and the area of word identification should consider, at least, the following broad questions:

1. What is the nature of deaf readers’ lexical processes and word identification skills? Is this nature similar to or different from that of typical, good, hearing readers?
2. Is the use of word identification skills related to the type of word processing in the mental lexicon?
3. What types of word identification skills are critical for reading comprehension: phonics, structural analysis, or others?
4. Do word identification skills need to be taught or is it possible to develop these skills during the process of reading?
5. How can we improve the word identification skills of students so that these can be used in a reciprocal relationship with existing comprehension skills?

Relative to the last question, it should be clear that adequate word identification skills do not lead necessarily to adequate reading comprehension levels. In fact, it is argued that word identification and comprehension have a facilitative, reciprocal relationship. Nevertheless, there is little or no evidence that students with adequate reading comprehension ability have poor word identification skills (Adams, 1990; Stanovich, 1991, 1992). This seems to imply that more research and instructional efforts in education and deafness need to be focused on the contributions of word identification ability to overall reading comprehension than is now the case (Paul, 1998).

Conclusion

The main intent of this article was to provide a brief overview of the literacy perspective relative to the reading and writing skills of deaf students. I argued that adherence to a single school of thought within this perspective may contribute to a misunderstanding of the reading process. The primary example has been the notion of word identification. In essence, a fixation on and the interpretation of the findings of only one school of thought might also lead to the adoption of a specific instructional method that does not contribute substantially to an improvement in the reading comprehension level of deaf and hard-of-hearing students.

I believe that none of the three schools of thought within the literacy perspective is sufficient for a complete understanding of literacy and deafness, or for understanding literacy with other children (e.g., McCarthey & Raphael, 1992; Paul, 1998). Perhaps, a worthy endeavor for theorists and researchers is to develop models and to suggest instructional strategies that incorporate the overlapping or collaborative tenets of these major frameworks. McCarthey and Raphael (1992) explain:

The three theories can work together to build a picture of the converging processes of reading and writing. The information processing lens focuses on questions related to the components of writing and reading, relationships among the components, effects of one process on the other, expert/novice and good/poor reader differences, and the structure of knowledge. The lens of the naturalist theory focuses on questions related to the type of environment that facilitates and supports reading and writing, issues in creating child-centered curricula, and
children's underlying cognitive structures. Finally, social-constructivist theories focus our attention on the issues of the social origins of reading and writing, emergent literacy (including connections between oral and written language), the developmental priorities of reading, writing, and oral language, how language and literacy tools have been used historically and across cultures, and how children learn to use literacy in unique and personal ways. (pp. 25–26)

References


