INTRODUCTION

Literacy has been viewed traditionally as the ability to read and write. Citing the Workforce Investment Act of 1998, the National Institute for Literacy (2011) expanded the definition of literacy to include an individual’s ability to read, write, and speak in English and to compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society. Literacy today encompasses an even broader array of skills and involves knowledge in particular fields, such as information literacy, family literacy, and media literacy. Literacy, then, is the foundation on which many skills needed to be successful in society rests. Non-literate persons are at a distinct disadvantage in a society that values these skills.

This chapter reviews literacy development for typical individuals; contrasts that development with the difficulties that individuals with severe speech and physical impairments encounter in developing literacy skills; and assesses the impact of assistive technology [particularly personal computers and augmentative and alternative communication (AAC) devices] on literacy acquisition for these individuals. Vendors for all hardware and software programs discussed in this chapter may be found in Appendix A. An overview on available technology tools for emerging literacy is provided in Appendix B.
Chall (1983) described five stages of literacy development, which have been widely accepted as guidelines for monitoring literacy acquisition in typically developing individuals. In her model, Stage 0 is the preliteracy stage, occurring between the ages of birth and 6 years. In this stage, children rely on contextual information provided by pictures and highly predictable language patterns to develop an understanding of the world around them. Beginning phonological awareness (e.g., understanding beginning and ending sounds of words) occurs in this stage. Stage 1, the initial reading or decoding stage, occurs between the ages of 6 and 7 years. In this stage, children associate letters with sounds, focus on print and text, sound out words, and use invented spelling strategies. Direct teaching of decoding strategies is crucial in this stage. Stage 2, the confirmation or fluency stage, occurs between the ages of 7 and 8. In this stage, the child has moved from decoding to comprehension and meaning. Orthographic (or sight) awareness of words is stabilizing and thus speed and accuracy are enhanced. Multiple opportunities to practice this fluency with words are needed during this stage. In Stage 3, the reading for new learning stage, which occurs between the ages of 8 and 14 years, individuals begin to use reading as a tool. Words facilitate the acquisition of new knowledge, and strategies for monitoring comprehension must be taught as readers deal with narrative and expository texts. In Stage 4, the multiple viewpoints stage, typically occurring from ages 14 to 18, readers are able to interpret more complex texts and can discriminate different points of view found in them. Finally, Stage 5 represents a level of specificity with text in which the adult reader can use high-level abstractions and generalizations to build his or her own critical appraisal of the world from what he or she has read. The development of literacy, then, is a lifelong journey in which a scaffold is assembled early upon which to build requisite skills.

Cunningham, Hall, and DeFee (1991) proposed a developmental model for literacy learning, called the “Four Block Model,” used with early elementary-aged children. In their model, the classroom is set up so that children spend at least 20 minutes daily in each of the four blocks. The four blocks include: (1) guided reading, in which children are exposed to various reading materials and learn the “thinking” aspect of reading; (2) self-directed reading, in which children choose their own reading materials and respond to questions about them; (3) writing, where children write about topics they select and work with one another to edit draft texts; and (4) working with words, where strategies for decoding and spelling are