INTRODUCTION

Aphasia is a language impairment resulting from damage to areas of the brain that are responsible for the comprehension and formulation of language. Speech and language treatment approaches to remediate language impairment in persons with aphasia (PWA) have evolved over the past century. The catalytic event that enhanced the role of behavioral intervention in aphasia rehabilitation was the presence of a large number of World War II veterans who had acquired aphasia after traumatic brain injuries (Benson & Ardilla, 1996). Since that time, there has been continuous advancement in the development of medical and behavioral intervention approaches for PWA. This advancement was primarily a result of the following factors: (1) development of imaging technology such as functional magnetic resonance imaging, positron emission tomography, and computerized tomography that has enhanced understanding of brain organization of language; (2) increase in knowledge base in neurophysiology and neural mechanisms that underlie recovery after brain-injury; (3) increase in empirical data that provide strong scientific basis for the wide spectrum of
language and other behavioral intervention approaches; and (4) advances in computer technology and speech synthesis resulting in the development of software programs and speech generating devices (SGDs) that have provided new avenues of communication for PWA (Koul & Corwin, 2003).

There is a wide variability in linguistic characteristics demonstrated by PWA (e.g., Brookshire, 2003; Goodglass & Kaplan, 1983; Kertesz, 1982; Porch, 1981). The linguistic characteristics and associated sensori-motor symptoms observed in PWA depend on several factors such as the size of the lesion, the role of the damaged locus in processing the specific brain function, and the remote effects of the lesion on distant brain tissue (Mountcastle, 1978). These factors in conjunction with socio-demographic variables (e.g., age, gender, education) play a strong role in the recovery of language function in PWA. Many PWA demonstrate severe speech and language deficits, and their ability to use natural language may be permanently and severely impaired (Koul & Corwin, 2003). Such individuals may benefit from augmentative and alternative communication (AAC) methods. These include symbols, aids, techniques, and strategies for either augmenting speech and/or providing an alternative means of communication (Lloyd, Fuller, & Arvidson, 1997). The primary purpose of this chapter is to provide a comprehensive review of approaches to classify AAC for PWA. Two approaches to AAC intervention will be presented. The first approach relates to the presence or absence of the use of technology in AAC intervention (Koul & Corwin, 2003). This approach proposes that all components of AAC systems (i.e., symbols, aids, techniques, strategies, and partner education/training) must be integrated to produce desired results. The second approach focuses on the communication needs, cognitive-linguistic competencies, and participation levels of PWA (Garrett & Lasker, 2005; Lasker, Garret, & Fox, 2007). This approach proposes that candidates for AAC intervention can be classified into two primary clinical groups: partner-dependent communicators and partner-independent communicators. Within these two primary groups are several subgroups based primarily on specific cognitive-linguistic competencies of PWA.

**AAC INTERVENTION BASED ON USE OF TECHNOLOGY OR NO-TECHNOLOGY OPTIONS**

This section provides a comprehensive review of the two major AAC options available for PWA.