Adult Learning Theory: Applications to Aphasia Research and Treatment

As humans age, acquisition of new knowledge is influenced by exogenous and endogenous variables. Aphasia treatment is predicated on developing personalized goals designed to facilitate learning of compensatory strategies designed to ameliorate the language and communicative deficits exhibited by our patients. Clinical aphasiology has paid little attention to the effects of aging on aphasic individuals' ability to learn new skills. The most widely used aphasia tests are not designed to assess new learning potential of patients (Goodglass, Kaplan & Berresi, 2001; Kertesz, 1982.). Consequently, aphasia clinicians may find themselves in an information vacuum when trying to identify optimal treatment approaches based on sound adult learning theory.

As we face a rapidly aging worldwide population interest in life span changes in cognitive processes and changes in learning efficiency and older adult learning preferences have an ecologically valid perspective to offer the aphasia researcher and clinician. For example, a study by Austin-Wells, Zimmerman, and McDougall (2003) showed that their normal community-dwelling subjects (all age 65 or older) identified a clear preference for PowerPoint slides compared to flip charts and overheads during an educational presentation. Subjects responded favorably to the intensity of the visual display as well as the organization of information on each slide. It's reasonable to suggest that incorporating findings of normal older adult presentation preferences into experimental and treatment aphasia protocols with older subjects may positively influence performance.

The theoretical constructs of fluid and crystallized intelligence offer an intriguing framework to understand the factors that may contribute to success or failure of a given individual in treatment. According to Kliegel and Altgassen "Fluid intelligence comprises the resources that enable us to solve new cognitive problems without the help of earlier learning experiences; it reflects such things as attention and short-term memory" (2006, p.112). Within this construct, fluid intelligence is thought to represent the biological support for cognition. Normal aging leads to decline in these biological supports. Crystallized intelligence refers to the ability to use accumulated knowledge and life experience to solve familiar cognitive problems. In contrast to fluid intelligence, crystallized intelligence appears to increase or stabilize with age (Schaie, 2005). Understanding how both may contribute and positively or negatively influence older adult learning may contribute to a better understanding of the older aphasic adult's learning limitations and learning potential.

Another area of research that has great potential to assist aphasia clinicians is the body of literature on how older adults adapt to computers and use of the internet. For example, many clinicians incorporate computer and internet activities as part of life participation approaches to aphasia therapy. Although personal computing has become a ubiquitous part of daily life, many older adults do not easily adapt to the technology. Numerous studies have demonstrated age and gender related differences in computer skill acquisition and use (Dyck and Smither, 1994; Echt, Morrell & Park,1998; Namlu,

2003). Consequently, utilizing strategies for teaching computer skills and literacy obtained from the normal aging literature may contribute to treatment success with older aphasic clients.

The extant literature suggests that there age-related factors which influence intelligence and learning in normal older adults. Consequently, it's reasonable to suggest that aphasiologists would benefit from evaluating the performance of subjects and patients alike within the context of the gerontology of learning. This review paper is designed to facilitate a discussion on the utility of these theoretical models and empirical findings to contribute to a more thorough understanding of aphasic individual performance.

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