2. COGNITIVE APPROACHES TO SECOND LANGUAGE ACQUISITION

A Symbiosis between Nature and Nurture

INTRODUCTION

Cognitive approaches to second language acquisition (SLA) are mainly concerned with the individual’s mind “as a processor of information rather than with the specificity of the linguistic information it contains” (Mitchell & Myles, 2004, p. 129). Although still research needs to be carried out, recent cognitive approaches and models have made well-developed proposals for situating their stance in SLA. The present paper, from the one hand, expounding reflections on the cognitive approaches to SLA, discusses several pedagogical implications for L2 teaching and learning. On the other hand, it declares that in cognitive approaches to SLA, a symbiosis between nature and nurture is shaped. In a sense, the dichotomy of nature and nurture needs to be abandoned because SLA is the byproduct of an interaction of the two.

The cognitive approach to SLA is a relatively new and innovative field of study, gradually becoming the mainstream domain of SLA investigation. The root of cognitive perspective on SLA takes its inspiration from Piaget’s cognitive determinism (Owens, 1996) in that language development is mainly determined by one’s cognition development. In other words, cognitive development is seen as a prerequisite for acquiring and using language (Nelson, 1991). However, cognitive approaches to SLA are not purely rationalist. In fact, cognitive perspectives on SLA attempt to find a middle path between rationalist and empiricist approaches. The rationalist aspect of cognitivism is more evident in formal approaches, such as Chomsky’s (1957) Universal Grammar (UG), contending that “it is possible to study language as a formal or computational system, without taking into account the nature of human experience” (Evans & Green, 2006, p. 44). The empiricist aspect of cognitive approaches, in contrast, emphasizes that language cannot be investigated in isolation. Thus, truths about the world can be discovered through experimentation and observation (Ellis, 1999).

In this regard, Ellis (2003) asserts that SLA is governed by two general laws, that is, associative learning and cognitive learning. Associative learning is influenced by the doctrine that learning happens when connections are made between ideas. In contrast, cognitive learning occurs because human beings are born with innate knowledge.
The present chapter provides a theoretical debate concerning the stance of cognitive approaches to SLA. In order to accomplish this, the writers of this paper begin with the most general perspectives on SLA and gradually focus on more specific issues.

THEORETICAL LINCHPINS OF COGNITIVE APPROACHES TO SLA

Debates over cognitive approaches to SLA range across a slew of issues, but there is a consensus among scholars that language, per se, is part of cognitive development. H.D. Brown (2007) considers cognitive development “as a process of moving from states of doubt to certainty” (p. 67). Piaget (1952), in the same vein, cogently contends that cognitive development is the process of moving from the state of disequilibrium to equilibrium. Put differently, the developing mind is constantly seeking for equilibration – a balance between what is known and what is recently being experienced. Equilibration is accomplished by two complementary processes: assimilation (i.e., modifying incoming information to fit our knowledge) and accommodation (i.e., modifying our knowledge to include new information). These two processes contribute to what Piaget calls adaptation, a process of learning from the environment and adjusting to changes in the environment.

Another common explanatory scenario for cognitive development is suggested by McLaughlin (1987). In line with Piaget’s assimilation-accommodation paradigm, McLaughlin’s model regards language acquisition as the gradual automatization of skills through stages of restructuring and linking new information to old knowledge. Restructuring, according to McLaughlin, refers to the process of imposing a new organization on the information earlier stored in long-term memory. As to SLA [is] interlanguage, where individuals restructure transitional grammars that are seen to violate more recently acquired principles” (p. 67). Interlanguage is defined as “the interim grammars constructed by the second-language learners on their way to the target language” (McLaughlin, 1987, p. 60). “These mental grammars are perceived as dynamic and [are] subject to rapid change” (Ellis, 1994, p. 352).

Undeniably, interlanguage is variable (Ellis, 1985). “Variability refers to cases where a second language learner uses two or more linguistic variants to express a phenomenon, which has only one realization in the target language” (Song, 2012, p. 779). However, according to Ellis (1985), interlanguage is systematic, while it is variable. Although seems contradictory, the notion of variability and systematicity is reconcilable. That is, variability, per se, is either systematic or nonsystematic (Ellis, 1992). As Ellis remarks, the variability that can be predicted and accounted for is systematic variability. Ellis further holds that systematic variability results from linguistic, situational, and psychological contexts. In contrast, the variables which are not part of one’s language competence, including false starts, slips of the tongue, changes of mind, and so on are unsystematic variability. In this regard, Song (2012) maintains that “non-systematic variation occurs when new forms are assimilated