Chapter 9
The Executive Function of the Brain as Applied to L2 Instruction in the Diverse Classroom

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ABSTRACT

This chapter explores the executive function (EF) of the brain and its relevance in the second language (L2) classroom through a methodology that focuses on form as content. The author emphasizes the scaffolding of vocabulary and grammar in order to effectively break down content into manageable parts. The chapter also examines the three Rs, reception, retention, and reproduction, as imperative principals when introducing new material in a language class. Reception refers to the way in which the content is introduced, retention is the presentation of the material, and reproduction is the guided practice. The ultimate aim of the chapter is to help language educators realize that knowledge of the executive function of the brain and the skills associated with strengthening a weakness in this area can enhance instruction and productivity in the diverse L2 classroom.

INTRODUCTION

The goal of this chapter is to assist teacher candidates to understand that the knowledge of the Executive Function (EF) of the brain and the skills associated with strengthening it enhances instruction and productivity in the L2 classroom. In line with this, the content is divided in the following sections. The first one addresses the problematic of labeling classroom spaces in terms of “special” vs. “mainstream.” Thus, the purpose of this section is to help the teacher candidate unify the seemingly unrelated categories of L2 instruction and cognitive challenges. In order to reach all students, regardless of their learning differences, it is imperative that the L2 instructor moves away from the mainstream / special dual ideology. The second section provides a general overview of the cognitive function of the executive element

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of the brain, the neurological causes of any dysfunction, and the challenges which result. This type of education is critically important for teacher candidates and should lead to discussions concerning the structure and performance of the language in terms of the natural design of the brain. The third section discusses the critical importance of teaching language structure from a non-dual perspective, giving form and content equal value. This is followed by practical implications related to the instruction of nouns and verbs in a systematic reception, retention, and reproduction learning cycle. The teaching procedure discussed will revolve around the concept of scaffolding. In general terms, this concept is used synonymously with “guided instruction” (Fisher & Frey, 2010, p. 10). The final section focuses on the ways in which a teacher program could provide its candidates with the opportunity to reinforce the knowledge in this chapter based on the model of the Community of Practice (Wenger, McDermott, & Snyder, 2002).

ADDRESSING THE LONGSTANDING DUALITY IN TEACHER EDUCATION

This section attempts to close the gap between the duality of theory and practice. A good place to start is by briefly exploring the split embedded in the concept of dual constructions, and the resulting binary oppositions, in order to challenge this false hierarchy. Unfortunately, educational thought is fraught with these dichotomies (Mander, Danaher, Tyler, & Midgley, 2011), best exemplified by the theory/practice binary (Singh, 2011). In this false construction, theory is placed at the top of the equation, thus, taking up the dominant role, while practice is placed at the bottom, as the supplement. Yet, practice is, in fact, actually holding up theory in this structure, making it anything but inferior. Therefore, these two elements should not be seen in opposition, but instead, given equal value.

The use of the binary is problematic for many reasons, not the least of which is the fact that one construction sets off others in a never-ending abysmal cycle of damaging, stereotypical categorizations. For example, let’s look at the following educational division: mainstream/special. This set-up defines the so-called mainstream student as the point of reference, the good, model pupil. On the other hand, the special student is deemed as the Other, the bad child, who doesn’t quite belong. Our regular learning spaces are not typically designed for them. Many times, pupils, who are perceived as having any type of cognitive challenge, are associated with this highly stigmatized category. A student, who needs extra help, is at a disadvantage. Instead, the mental image of the desirable mainstream pupil is the one who gets the content without needing further instruction. If a learner requires continual clarification or rectification, the teacher might feel the need to send this “trouble(d)” one elsewhere. The act itself, of pulling a student out of the center of learning, conveys a message of diminishment. It places the onus on the learner, when, in fact, it belongs to the institution.

Indeed, some students require outside intervention to function well in their classes. In conjunction with the teacher’s best efforts and after careful evaluation, it can produce positive results. However, even if a pupil with extreme difficulties must leave the so-called mainstream classroom, there remains a room full of others, who might struggle in other ways but can be reached through a student-centered teaching methodology, focused on awareness and intentionality. However, a first step in this process of awareness is to realize that there are priorities. The students and their learning must top any list of responsibilities, everything else, outside of it, should receive a significantly less amount of effort. Early in their studies, teacher candidates must be instructed in the practice of advocacy.

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