

Chapter 5

Assessment Techniques in EFL Brain-Compatible Classroom

Walaa M. El-Henawy
Port Said University, Egypt

ABSTRACT

Neuroscience has disclosed important information about the brain and how it learns. Brain-Based Learning is student centered learning that utilizes the whole brain and recognizes that not all students learn in the same way. Assessment and evaluation are necessary and important elements of the instructional cycle. Feedback also motivates students and allows students to apply what they have learned to real-life situations. This chapter presents attempts to explain brain-compatible assessment and alternative or authentic assessment and its different forms that can be used in providing brain-based education.

BRAIN-COMPATIBLE CLASSROOM

Education initiatives that link current practice with promising new research in neurological and cognitive science offer real possibilities for improving teaching and learning, especially for students with diverse learning needs (Hardiman, 2001). Neuroscience has disclosed important information about the brain and how it learns. Brain-Based Learning (BBL) involves acknowledging the brain's rules for meaningful learning and organizing teaching with those rules in mind (Caine & Caine, 1991). Brain-based education refers to learning in accordance with the way the brain is biologically designed to learn. Brain-based teaching encourages educators to consider the nature of the brain in their decision-making in an effort to reach more learners (Morris, 2010). Brain-compatible education introduces an orientation for ensuring that no child is left behind that is focused specifically on sustained achievement for all students (Ronis, 2007a).

Brain-based learning theory focuses on concepts that create an opportunity to maximize, the transfer of knowledge, attainment and retention of information. The principles of brain-based learning provide a theoretical framework for the effective learning and teaching process, seeking the optimal conditions in which the brain's infinite capacity to make connections and understand are maximized. Caine and Caine (1991) list these principles as follows:

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1. Brain is a parallel processor,
2. Learning engages the entire physiology,
3. The search for meaning is innate,
4. The search for meaning occurs through patterning,
5. Emotions are critical to patterning,
6. Every brain simultaneously perceives and creates parts and wholes,
7. Learning involves both focused attention and peripheral attention,
8. Learning always involves conscious and unconscious processes,
9. We have at least two types of memory systems: spatial and rote learning,
10. The brain understands and remembers best when facts and skills are embedded in natural spatial memory,
11. Learning is enhanced by challenge and inhibited by threat,
12. Every brain is unique.

The principles of brain-based learning propose that effective learning could occur only through practicing real life experiences. Learning becomes more expressive when the brain supports the processes in search of meaning and patterning. Accordingly, it enables the learners to internalize and individualize learning experiences. Therefore, it is essential that learners be encouraged to participate in the learning and teaching process actively and that teaching materials be chosen according to their learning preferences (Ozden & Gultekin, 2008). It is the teacher's job to create enriched environments that help students learn (Caine, Caine, McClintic & Klimek, 2005).

According to Jensen (2008; cited in Morris, 2010), school administrators and teachers considering transforming schools into brain-based teaching environments must reflect on how schools influence the brain by addressing the following aspects:

1. **Curriculum (What We Teach):** The curriculum should incorporate real problems, organize simulation activities, and supply plenty of novelty and feedback.
2. **Instruction (How We Teach):** Teaching is the art of changing the brain. There are many ways to learn, so students should receive instruction in many styles, including visual, auditory, and kinesthetic. Every classroom should target the strengthening of some specific brain functions, such as attention controls, higher thinking abilities, or problem-solving skills.
3. **Environment (Where We Teach):** Classrooms should offer stimulating, collaborative atmospheres. These students need to be in an environment where students are known and where sharing and dealing with emotional issues are possible.
4. **Assessment (How We Measure Teaching):** Students should be informed of basic brain facts and ways to keep the brain in top condition for high test success. Teachers should plan test preparation activities for the student's developmental stage and unique ways of learning. Students should be evaluated in more than one way. For instance, students could choose to construct models or projects to demonstrate their learning.
5. **Staff Development (The Change Process):** Teachers should critically evaluate what is and is not working in order to improve student performance results. Teachers should always consider implementing current practices, such as brain-based education to enhance their instructional methods.

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