

## IMPROVING MARKETING EDUCATION: LESSONS FROM BRAIN SCIENCE

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### ABSTRACT

Knowledge about how the brain works has grown in recent years. While it is too early and brain science is too isolated from educators for its findings to be broadly useful for improving education, further transfer of reliable brain science findings into marketing education is needed.

### BACKGROUND

Despite recent research advances much of how the brain works is still a mystery. Brain science has found that brains learn in order to enable the solution of novel survival problems confronting people from moment to moment. Brains attend to input according to their capacity to attend and, more importantly, according to indicators of the information's meaningfulness. Visual images are strongly preferred inputs and attention spans are relatively short. In order to sustain a brain's engagement, breaks and motivations to continue attending to the information are necessary.

Hierarchically organizing information facilitates declarative memory. Memory is dramatically improved when information is repeated within certain time frames (e.g., 20 seconds; 90 minutes) and then supported by on-going repetition and rehearsal distributed over extended periods of time. Memory is further enhanced when information is more elaborately encoded. Interfering inputs must be reduced. Rest between learning sessions is needed.

Brains learn best when their stress loads are reduced. Regular exercise reduces stress hormones and improves brain health and mental acuity. A balanced diet contributes learning effectiveness. Regular and sufficient sleep is vitally important. Brain gender is also an important individual difference, especially as regards emotional memories.

Emotional connections add meaningfulness and elaboration enhancing memory. Further, brains need to sense that their environment is safe before they can shift into cognitive mode. Affective issues

in relationships with others affect the perceived safety of an environment.

### IMPLICATIONS

Marketing education must capitalize on a brain's purpose and function rather than expect it to perform in ways it was not designed to perform.

**Outcomes.** Marketing educators should pursue knowledge and skill outcomes which are readily recognized as relevant and meaningful to students.

**Assessment.** Repeated measures of students' knowledgebase are needed. Marketing educators need to gauge students' ability to contextualize their knowledge-base to novel situations. This may require more usage of embedded direct assessments spread across the curriculum. Student evaluations of teaching should focus on how well the instructor organized information, managed attention, used repetition and elaboration, and assured productive relationships.

**Instructional Design.** Marketing educators must adopt brain smart instructional designs in which information is hierarchically organized, ordered into meaningful segments and repeated. Breaks must be inserted into presentations. Multi-channel communication, emphasizing the visual channel and kinetic interaction with concepts, is warranted. Because the brain is deeply concerned with social relationships (safety), instructors must communicate empathy.

**Curriculum.** Traditional curricula probably miss most of the opportunity to optimize learning. Horizontally or vertically integrated curricular structures may provide opportunities for improvement, but may also be insufficient in hierarchical organization and intentionality of repetition and rehearsal with elaboration. Problem-based or repeating modularized (i.e., "helical") structures may be even better, but are likely difficult to enact.

**References and Exhibits Available on Request**