

Chapter 6

The Science Behind Neuromarketing

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ABSTRACT

With the change and development of technology, the techniques used in marketing research have also changed. Quantitative and qualitative research techniques have been applied to traditional marketing research. Although these techniques are applied, the purchasing decision process of the consumer is not fully understood. The decision-making processes of consumers are more clearly understood thanks to the neuromarketing approach that arises as a result of the collaboration of marketing with neuroscience and the research methods applied as a requirement of this understanding. In this chapter, research methods used in the field of neuromarketing will be examined, examples of applications will be given, and suggestions will be made to academicians and practitioners.

INTRODUCTION

Marketing research is defined as a process that reports information that can be used to solve marketing problems, such as pricing or determining the most effective advertising environment. The focus is on the process that leads to the information to be used to make decisions. It should also be noted that this definition refers to information that can be used to solve a particular marketing problem. American Marketing Association (AMA) defines marketing research as a function that connects marketer and consumer, customer and public, and information used to identify marketing opportunities and problems (creating, refining and evaluating marketing actions; monitoring marketing performance, and developing marketing understanding as a process). The AMA definition states that the function

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of marketing research is the consumer to the marketer by providing information that can be used in marketing decisions (Burns and Bush, 2014).

Traditional consumer behavior research is the systematic collection, analysis and investigation of incidents or business marketing and service cases. Methods include interviews, surveys, projective tests, and observations to investigate consumer preferences, demands, and purchasing intentions (Hsu and Cheng, 2017). The concept behind neuromarketing research is to reveal responses that the individual cannot consciously control, so that the individual becomes unwilling or oblivious. Practitioners claim to have these methods (Burns et al. 2017).

The neuromarketing term includes practitioners interested in company-specific marketing research and eye tracking, skin conductivity, electroencephalography (EEG) and functional magnetic resonance imaging (fMRI) and commercial vehicles. Neuromarketing has shown great interest in the corporate world, and the growth of neuromarketing companies has been impressive over the past decade (Plassmann 2012). The contribution of neuroscientific methods becomes important for the knowledge of human behavior in the context of marketing. Also, another interesting issue is the dependence of the verbal response used in traditional marketing research today, and insights and indicators are based on the goodwill and accuracy of the experimental subject, which informs the experiment's feelings and views. Instead, using brain imaging can distinguish cognitive and emotional experiences (expressed verbally during a session) and unconscious mental states from brain activation in different areas. Interesting empirical evidence suggests that the use of brain imaging may coexist with classical tests commonly used in marketing sciences in the near future (Vecchiato et al., 2013).

In summary, neuromarketing techniques can help us understand the unique characteristics of services. Concretely, product-based consumer decision making is not suitable for intangible purchases (Fugate, 2008).

In this chapter, we will define the most common neuroscience-based research techniques solely utilized in neuromarketing research with their advantages and disadvantages.

NEUROMARKETING RESEARCH TECHNIQUES

I. Neurometric Techniques

a) Functional Magnetic Resonance Imaging (fMRI)

The primary form of fMRI uses the blood-oxygen-level dependent (BOLD) contrast, discovered by Seiji Ogawa in 1990 (Huettel et al., 2009). fMRI is based on MRI, which in turn uses nuclear magnetic resonance coupled with gradients in magnetic field to create images that can incorporate many different types of contrast (Glover, 2011).

fMRI is a common technique in neuromarketing and consumer neuroscience that has the potential to identify brain mechanisms, distinguish between different psychological developments, understand individual differences, and improve behavior prediction (Hubert et al. 2017). fMRI measures the increase in oxygen level in blood flow at the brain level. This can clearly indicate when the brain finally increases the effectiveness of the meeting. When neurological activity increases, the brain is found searching for oxygen-containing blood to increase this activity, and fMRI increases (Pradeep, 2010) (Please see the figure 1. below).

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