Customers Perception about Neuromarketing Techniques Adopted by Multinational Corporations

Dr. Nilesh Anute
Associate Professor, ASM's Institute of Business Management and Research, Pune.,
nileshanute@gmail.com
Dr. Pradnya Bhandare
Associate Professor, G.H.Raisoni Institute of Engineering and Technology, Nagpur.
pradnyab.26@gmail.com
Dr. Sheetal Umbarkar
Assistant Professor, Dr. D. Y. Patil Institute of Management and Research, Pune.
skumbarkar9@gmail.com

Abstract

The use of neuroscience and cognitive science in marketing is known as neuromarketing. This can involve market research that looks for consumer demands, drivers, and preferences that conventional techniques like focus groups and surveys are unable to reveal. The objective of this research paper is to study the awareness of neuromarketing techniques amongst customers and its impact on their purchase decision. Researchers have collected the data from 180 respondents using survey method with the help of well-structured questionnaire. The researcher identified that descriptive research design and Non probability convenience sampling method is suitable for the research study. The findings of this study will be useful to many companies to modify their neuromarketing techniques and to design the new techniques for customer retention and customer acquisition.

Keywords: Neuromarketing, Customers perception, Customers awareness, Effectiveness, Multinational corporations. etc.

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Introduction

To better understand how consumers respond subconsciously, neuromarketing can evaluate particular advertising, marketing, packaging, content, etc. Additionally, it may involve using the insights gained from studies in neuroscience and cognitive science to improve marketing without first subjecting different ads or other materials to testing. Neuromarketing is also referred to as "consumer neuroscience." Infiltrating consumers' thoughts is much easier with the aid of neuromarketing. By gaining knowledge about the responses and choices being made at the unconscious level, neuromarketing seeks to better understand consumer behaviour. In the human brain, about 90% of the information is processed subconsciously.

Neuromarketing Techniques Adopted by MNC's

Functional magnetic resonance imaging, also known as fMRI Technically referred to as fMRI, it measures the blood flow in the brain that is correlated with increased neuronal activity. The device tracks alterations in the flow of oxygenated blood in response to mental activity. Certain levels of consumer engagement can be measured by this kind of technology; for instance, fMRIs can be used to determine how consumers feel about elements like pricing. It's vital to remember that fMRI is less accessible and practical than other neuromarketing methods because the equipment is pricey and testing must be conducted in a lab with the subject lying still within a machine.

The EEG (Electroencephalogram) is a neuroscience instrument that offers useful data on brain activity and is seen as a more affordable substitute for fMRI. For metrics like recall, engagement, positive/negative perception, and attention, marketing stimulus values can be assessed using EEGs, a non-invasive electrical brain imaging technology. The gear is pleasant to wear, lightweight, and portable. Sensors are placed on the participants' scalps to measure electrical brain waves, which are then used to record the participants' natural activities.

Eye-tracking - As the name suggests, this method measures eye movements and keeps tabs on people' shifting gaze. Eye tracking is helpful in determining what draws customers' attention, what perplexes them, and how quickly they can identify brand aspects. Since this technology is unable to detect emotions, it should be used in conjunction with other approaches, like biometrics, to fully comprehend the subconscious mind. There are several different eye-tracking tools available, including webcams, virtual reality glasses, stationary eye-trackers, and eye-tracking spectacles (although webcam eye-tracking is the least precise of all the devices). One of the most popular methods utilised in neuromarketing research is eye-tracking because these gadgets are so inexpensive and simple to use.

Pupillometry is an eye-tracking technique used to gauge a subject's pupil dilation. The findings can be used by marketers to gauge how engaging their marketing messages and creative are. Increased dilation may be a sign that the exam materials are entertaining or engaging the participants more. Pupillometry testing needs to be carefully controlled in order to produce valid results because variations in luminance (lighting) during testing will also alter pupil dilation

Biometrics - For many years, marketing researchers have used biometrics to assess how the body reacts to various stimuli, including television, messaging, print advertisements, internet and digital experiences, and goods and services. In order to ascertain how customers feel about and react to marketing media, this neuroscience technology examines skin conductance, heart rate, and respiration.

The Facial Action Coding System (FACS), a piece of software, measures minute variations in facial expressions. A variety of emotions (such as rage or happiness) and emotional valence are measured using this technology (positivity and negativity). Marketers may better analyse customer reactions to marketing stimuli and brand perception with the aid of this affordable neuroscience tool. It's vital to keep in mind that, despite the fact that this method is thought to have a lot of potential, some experts believe it to be less objective and dependable than other neuromarketing technologies.

Importance of Neuromarketing

The word "neuromarketing" refers to the fusion of marketing and human psychology (cognitive thought process). This is a modern scientific method that has just lately gained popularity and has been shown to be one of the most efficient ways to examine consumers' cognitive and emotive reactions to marketing stimuli. Due to the overabundance of items from different brands offered by today's urbanised culture, customers exhibit cognitive bias. Thus, it demonstrates that it is a useful method for marketing research and understanding consumer behaviour.

Literature Review

Michael J.R. Butler (2008), the expanding subject of neuromarketing is one that requires flexible expertise. Numerous marketing scholars have identified the creation and use of neuromarketing data in various ways. Divergent views on what constitutes knowledge are not a novel problem, but discovering new Knowledge generation benefits from linkages between those views.

According to Martnez (2012), author of "The Consumer Mind," consumers' brains may be divided into four categories: what they think, say, do, and feel. A key finding of traditional marketing research, according to Martnez, is that "consumers contradict themselves, expressing what they want, but acting what they feel." As a result, Martnez contends that neuromarketing will enable marketers to gather more unbiased data from and about consumers than they could through the use of conventional marketing techniques like surveys and interviews.

Harit Kumar, Priyanka Singh (2015), in their research paper entitled “Neuromarketing : An Emerging Tool of Market Research” they found that neuromarketing is becoming a new tool to conduct market research by tapping of brain sense of the consumer to attract them for further buying.

Mr. Farhan Habib, PRT, S.T.S High School (2020), in their research paper entitled “Neuromarketing : Tracking Brain activities to understand Consumer decision making process” they found that neuro marketing has strong impact on consumer decision making process.

Azman H. Alsharif, Nor Zafir MD. Salleh, Rohaizat Bin Baharun, Mehdi Safaei (2020), in their research paper entitled “Neuromarketing Approach: An overview and future research

Type of Research Design	Descriptive Research Design
Sampling Technique	Non-Probability Convenience Sampling
Sampling Area	Pune City
Sample Size	180
Primary Data	Well-structured questionnaire
Secondary Data	Research papers, Articles, Books, Journals etc.
Data Analysis tools	IBM SPSS-20

directions" they found that though neuromarketing can be an upcoming marketing techniques, but it cannot replace traditional marketing techniques and hence it should be used only to analyse consumer' brains response towards marketing stimuli. It will help to understand consumer's decision making process more clearly.

Sarah Kari, Aarushi Arun, Mahek Pundir (2020), in their research paper entitled " Neuro Maketing and its effect on Consumer Behaviour and Brand Perception" they found that neuro marketing is helpful for both product placements and retargeting consumer psychology.

Mr. Adheer Goyal, Dr. Shriram Joshi, Dr. Mustafizul Haque, Miss. Swati Parmar (2021), in their research paper entitled "Neuromarketing: A Rising Appratus of Statistical Surveying" they found that neuromakreting can be used to identifying consumer behaviour and drawing them for additional purchase.

Surbhi Gambir, Ritu Sharma (2019), in their research paper entitled "Neuromarketing as a tool of customer engagement for encouraging on-line impulsive buying" they found that neuromarketing can help the companies to design their marketing strategies according to consumers.

Research Methodology

Objectives of the study

- To study the awareness of neuromarketing tools amongst the customers.
- To study the effectiveness of neuromarketing tools on customers purchase decision.
- To identify the gap between customers awareness about neuromarketing tools and its effectiveness on their purchase decision.

Hypothesis of the Study

- H1: Neuromarketing tools are effective in customers purchase decision.
- H2: There is a gap between customers awareness of neuromarketing tools and its effectiveness on customers purchase decision.

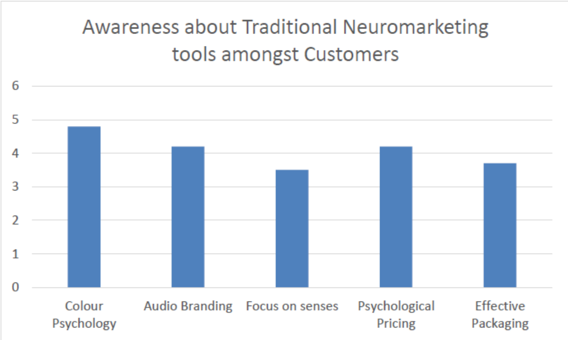
Research design

Data Analysis

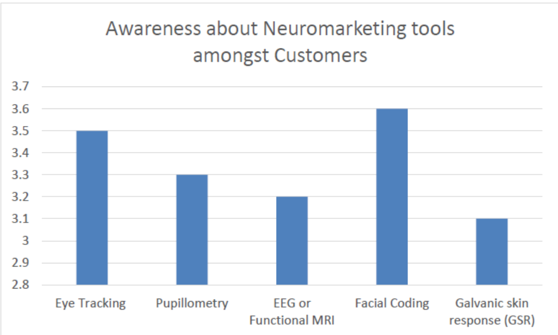
Awareness about Neuromarketing Tools adopted by MNC's

Measurement Tool	Very low awareness	Low awareness	Average	High awareness	Very High awareness
Rating Scale	1	2	3	4	5

Traditional Neuromarketing Tools	**Mean**
Colour Psychology	4.8
Audio Branding	4.2
Focus on senses	3.5
Psychological Pricing	4.2
Effective Packaging	3.7



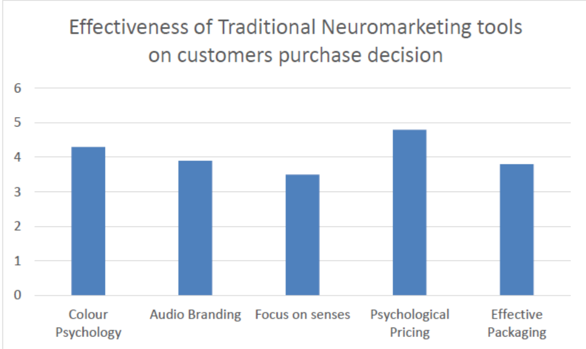
Modern Neuromarketing Tools	**Mean**
Eye Tracking	3.5
Pupillometry	3.3
EEG or Functional MRI	3.2
Facial Coding	3.6
Galvanic skin response (GSR)	3.1



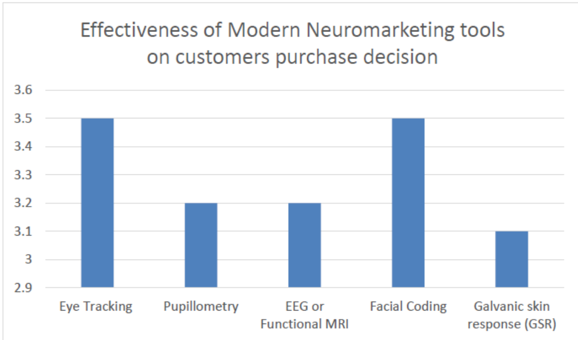
Effectiveness of Neuromarketing Tools on customers purchase decision

Measurement Tool	Very less effective	Less effective	Average	High effective	Very Highly effective
Rating Scale	1	2	3	4	5

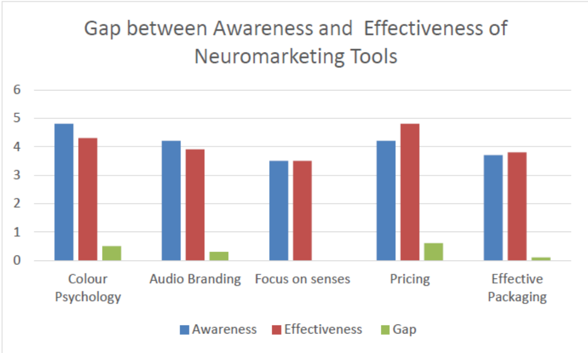
Traditional Neuromarketing Tools	**Mean**
Colour Psychology	4.3
Audio Branding	3.9
Focus on senses	3.5
Psychological Pricing	4.8
Effective Packaging	3.8



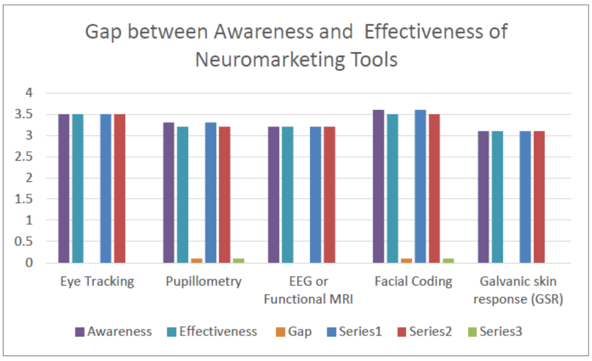
Modern Neuromarketing Tools	**Mean**
Eye Tracking	3.5
Pupillometry	3.2
EEG or Functional MRI	3.2
Facial Coding	3.5
Galvanic skin response (GSR)	3.1



Traditional Neuromarketing Tools	Awareness	Effectiveness	Gap
Colour Psychology	4.8	4.3	0.5
Audio Branding	4.2	3.9	0.3
Focus on senses	3.5	3.5	0
Pricing	4.2	4.8	0.6
Effective Packaging	3.7	3.8	0.1



Modern Neuromarketing Tools	Awareness	Effectiveness	Gap
Eye Tracking	3.5	3.5	0
Pupillometry	3.3	3.2	0.1
EEG or Functional MRI	3.2	3.2	0
Facial Coding	3.6	3.5	0.1
Galvanic skin response (GSR)	3.1	3.1	0



Hypothesis Testing

Hypothesis 1

- Null Hypothesis (H0): Neuromarketing tools are not effective in customers purchase decision.
- Alternative Hypothesis (Ha): Neuromarketing tools are effective in customers purchase decision.
- The researcher has tested the null hypothesis with the help of IBM SPSS 20. The researcher has applied Z test to check the null hypothesis. The P value identified is 0.01 which is less than 0.05 so the null hypothesis is rejected and alternative hypothesis is accepted at 5% level of significance.

Hypothesis 2

- Null Hypothesis (H0): There is no gap between customers awareness of neuromarketing tools and its effectiveness on customers purchase decision.
- Alternative Hypothesis (Ha): There is a gap between customers awareness of neuromarketing tools and its effectiveness on customers purchase decision.
- The researcher has tested the null hypothesis with the help of IBM SPSS 20. The researcher has applied Z test to check the null hypothesis. The P value identified is 0.01 which is less than 0.05 so the null hypothesis is rejected and alternative hypothesis is accepted at 5% level of significance.

Findings

- Customers are highly aware about traditional neuromarketing tools adopted by companies to attract them. The awareness about colour psychology (Mean 4.8) and psychological pricing (Mean 4.2) is very high.
- Customers awareness about modern neuromarketing tools adopted by companies to attract them is as compared to traditional tools is less. In modern neuromarketing tools facial coding (Mean 3.6) and eye tracking (Mean 3.5) have more awareness amongst customers.
- It is observed that traditional neuromarketing tools are highly effective in customers purchase decision. Psychological pricing (Mean 4.8) and Colour psychology (Mean 4.3) are most effective traditional neuro marketing tools.
- It is observed that modern neuromarketing tools are as compared to traditional neuromarketing tools are less effective in customers purchase decision. Facial coding (Mean 3.5) and Eye tracking (Mean 3.5) are most effective modern neuro marketing tools.
- It is observed from the present research that there is very little gap between awareness and effectiveness of traditional neuromarketing tools. In case of psychological pricing effectiveness is more than awareness which is positive sign for organizations.
- It is observed from the present research that there is very little gap or no gap between awareness and effectiveness of modern

neuromarketing tools. But both awareness and effectiveness is average.

- Customers are highly aware about traditional neuromarketing tools adopted by organizations to attract customers as compared to modern and emerging neuromarketing tools.
- The effectiveness of traditional neuromarketing tools on customers purchase decision is high as compared to modern and emerging neuromarketing tools.
- Colour psychology have the highest awareness and psychological pricing have the highest effectiveness on customers purchase decision amongst all neuromarketing tools.
- About Galvanic Skin Response (GSR) and Electroencephalogram (EEG)/ Functional Magnetic Resonance Imaging (FMRI) customer have least awareness and they also consider these two neuromarketing tools least effective in their purchase decision.

Conclusion

Neuromarketing is playing vital role in holding the existing customers and attracting new customers. MNC's need to focus more increasing effectiveness of modern/emerging neuromarketing techniques. There is need to understand consumer psychology in depth for designing neuromarketing techniques. During the shopping process, consumers become confused by the abundance of information about comparable products from various brands. By providing a full-fledged empirical research and analysis technique in areas like product creation, graphic design, distribution, and advertising of products and services offered generally, neuromarketing has essentially replaced traditional marketing practises. Therefore, it is a quality improvement that helps businesses develop and market goods in accordance with consumer taste and preference.

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