

A Study on Role of Neuromarketing – Success mantra of McDonald's

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ABSTRACT:

Neuromarketing is a recent emerging disciplinary field in marketing which applies neuropsychology to marketing research, to understand the rationale behind how consumers make purchasing decisions and their responses to marketing stimuli in order to apply those learning in the marketing realm.

The potential benefits of Neuro marketing to marketers include more efficient and effective marketing campaigns and strategies, and ultimately align the real needs and wants of the consumers with marketing strategies.

Companies, particularly those with large-scale ambitions to predict consumer behavior, have invested in their own laboratories, science personnel or partnerships with academia to understand the purchase behavior of consumer.

An attempt is made in the paper focusing on the Role of neuro marketing towards the success of McDonald's using Eye-Tracking technique of neuro marketing. The study is descriptive in nature, the primary data for the study will be collected from 150 customers of McDonald's from Bangalore city and appropriate statistical tools will be applied to analyse the data to arrive at the findings of the study.

Keywords: Neuro marketing, neuropsychology, consumer behavior.

I. INTRODUCTION

NEUROMARKETING-where brain science and marketing meet in very simple terms, Neuromarketing is a new field of marketing that studies the consumer's response to marketing stimuli. Neuromarketing is the application of neuroscience to marketing. It includes the direct use of brain imaging, scanning, or other brain activity measurement technology to measure a subject's response to specific products, packaging, advertising, or other marketing elements.

II. CONCEPT OF NEUROMARKETING

This concept was developed by psychologists at Harvard University in 1990. The word Neuromarketing was coined by Ale Smidts in 2002. It is an emerging branch of neuro science in which researchers use medical technology to determine consumer reactions to particular brands, slogans and advertisements. The first ever Neuromarketing conference was held in 2004 at Baylor College of Medicine in Houston. The base of Neuromarketing is “meme”. Meme is a unit of information stored in the brain. These units are effective influencing human who is making choices and decisions within 2.6 seconds. If meme is chosen properly we remember the good, joke or song and would share it. Memes stay in our memory and are affected by marketers.

Thus, Neuromarketing is a promising and emerging field with tremendous potential for application in the functional areas of marketing, brand management and advertising. It has emerged after bringing together applicable concepts from the field of neural-science, psychology, human neuro-physiology and even neurochemistry.

“Understanding the human mind in biological terms has emerged as the central challenge of science in the twenty-first century.”-By Dr. Eric Kandel, Neuroscientist and winner of the Nobel Prize for Physiology or Medicine Millions of people in our global economy have jobs that depend on communicating with and persuading the human brain.

So it is vital for us to understand how the human brain really works, what is attractive to it, how it decides what it likes or dislikes or how they decide to buy or not buy the infinite variety of products and services. The languages of consumers change from country to country and culture to culture, however the language of human brain is the same i.e. universal. Thus, Neuromarketing has greatly affected products, brands, packaging, and advertising as well.

III. LITERATURE REVIEW

- Marketing has traditionally concentrated on the value and competitive advantages of a product or service. However, a more holistic approach to marketing, including the emotional component of the decision-making process is gaining considerable ground in contemporary marketing (Suomala et al. 2012, p. 12).

This line of research corresponds very well with Kotler’s latest notion of marketing,

Marketing 3.0, in which he argues for a need of companies to address consumers as whole human beings, which he defines as consisting of four components: physical body, mind, heart and spirit (Kotler et al. 2010, p. 34) In other words, Kotler now argues for the need of companies to address the emotions of their customers and aim to understand their anxieties and their desires, if they want to succeed in the contemporary marketing landscape.

- Best-known technology of neuromarketing was developed in the late 1990s by Harvard professor Jerry Zaltman (Gerald Zaltman), once it was patented under the name of Zaltman Metaphor Elicitation Technique (ZMET). The essence of ZMET reduces to exploring the human unconscious with specially selected sets of images that cause a positive emotional response and activate hidden images, metaphors stimulating the purchase. Graphical collages are constructed on the base of detected images, which lays in the basis for commercials. Marketing

Technology ZMET quickly gained popularity among hundreds of major companies-customers including CocaCola, Genera Motors, Nestle, Procter & Gamble and McDonalds.

- Neuromarketing is an emerging field which bridges the consumer purchase decision with neuroscience (Christophe, 2011).
- Neuromarketing is advancing rapid believability and acceptance among advertising professionals. As everything depends on consumers' willingness and competency to describe how they feel when they are exposed to an advertising campaign, conventional methods for testing and predicting the effectiveness of huge investments generally have a minimal effect. Cutting edge methods for directly probing minds without requiring demanding cognitive or conscious participation are offered by neuromarketing.
- Recently, the International Journal of Psychophysiology called neuromarketing "the application of neuroscientific methods to analyze and understand human behavior in relation to markets and marketing exchanges" (Lee, Broderick, and Chamberlain 2007, 200). Indeed, improvements in neuroimaging technologies have and will continue to advance our knowledge of how people make decisions and how marketers can influence those decisions.

IV. RESEARCH OBJECTIVES

- Objective: 1 To study the stance of Neuromarketing in current scenario.
- Objective: 2 To identify the various techniques used in Neuromarketing.
- Objective: 3 To study the neuro marketing technique of McDonalds with an illustration.
- Objective: 4 To study the implication of Neuro marketing technique on success of McDonalds.

V. RESEARCH METHODOLOGY:

Data Collection:

- Primary Data:- Structured Questionnaire :The study was conducted by collecting primary data through administering a well-designed questionnaire to analyze the role of neuro marketing and its implication on the success of McDonalds.
- Secondary data: Research papers and websites.

Sample Selection:

- Tool and Technique : Convenience Sampling.
- Sample Size:
 - Questionnaire Distributed : 150 respondents

- Questionnaire Collected : 112 respondents.

Scope:

- The study was conducted in Bengaluru city.
- Eye-Tracking technique of neuro marketing has been used to conduct the study.

Limitation of the study:

- It is purely based on the responses given by the respondents.
- Due to time constrain only one technique of neuro marketing has been implemented for the conduct of the study and 112 responses have been received out of 150 responses expected.

VI. FINDINGS AND INTERPRETATION

OBJECTIVE: 1 THE STANCE OF NEURO MARKETING IN CURRENT SCENARIO.

The emergence of Neuromarketing has been reflected in almost all fields of industry as Automobile industries, the IT industries, FMCG Sector and then lastly turns our attention to the entertainment industry.

Some Major Stance of its presence are: -

- ❖ Hyundai Motors uses EEG-tests in the design process of their cars to measure consumers' reactions, when looking at specific parts of a car's exterior design. As Macko, manager of brand strategy at Hyundai Motors expresses it: "We want to know what consumers think about a car before we start manufacturing thousands of them" (Burkitt 2009).
- ❑ Cheetos The Orange Underground the American snack producer Frito Lay has used neuromarketing on several occasions (Brat 2010). Through use of neuroimaging Frito Lay found that the glittering, bright coloured packaging they were using for potato chips in 2008 triggered the anterior cingulate cortex of the brain, an area associated with feelings of guilt. When testing another type of packaging in matte beige colours with images of potatoes and other ingredients perceived as healthy, no activity of the anterior cingulate cortex was evident. Thus, Frito Lay switched out of shiny packaging and opted for the matte design with healthy ingredients depicted instead (Burkitt 2009).
- ❖ Yahoo has a 60-second television commercial that features happy, dancing people around the world. Before spending the money to air the ad on prime-time and cable TV as well as online, Yahoo ran it by EEG-capwearing consumers.
- ❖ Ebay's PayPal hopes to persuade more eshoppers to use its online payment service by pitching it as fast. Brain-wave research convinced PayPal that speed turns people on more than safety and security, the earlier themes in its ad campaigns.
- ❖ Microsoft is using EEG data to demonstrate how engaged gamers are when they use an Xbox. Working with EmSense, Microsoft put EEG caps on gamers and showed them ads on the videogame system. It tracked which parts of the brain were stimulated by the ads.

- ❖ Ford Motor DaimlerChrysler, Ford of Europe and other automakers are using medical research tools to examine the way consumers think so they can make sales messages more effective. Among the provocative early results from electrodes-on-the-scalp and Magnetic Resonance Imaging scanner research: Images of sports cars affect the pleasure center of the male brain the same way as sex, cocaine and chocolate.

OBJECTIVE: 2 TOOL AND TECHNIQUES OF NUEROMARKETING

- ❖ **EEG Analysis:** EEG is the abbreviation for Electroencephalography, which means an electrical reproduction of brain activity (Postma, 2012). Although the technique of EEG is a relatively old method, it is still considered to be an appropriate way to measure changes in the electrical field in certain brain regions (Ariely, & Berns, 2010; Morin, 2011; Camerer, Loewenstein, & Prelec, 2004; Madan, 2010). Electroencephalography is a process of brain scanning method that records the electrical activity on the scalp produced by the brain. Electrodes placed on the scalp pick up the subtle changes in electrical activity.
- **HD EEG:** It is an updated form of EEG can gather very accurate brain activity information while the consumer is exposed to a particular stimulus. This EEG system has 256 channels and has a very deep brain signal analysis with regards to source localization. Additionally the data gathered will allow us to produce highly accurate heat map images of the brain processes which will be included in the report produced.
- ❖ **Galvanic Skin Response:** Galvanic Skin Response, or skin conductance, is used to measure the temperature of the skin and its electrical conductance, which varies depending on the skin moisture level. Skin conductance is used to identify and measure psychological and physiological arousal. It's most common use is in lie detecting technology. The pulse rate is also measured through galvanic skin response. The fluctuations in the pulse reveal the level of excitement or stress that the person experiences as a response to certain triggers.
- ❖ **Eye Tracking:** Eye tracking technology is used to track the eye positioning as its focus shifts along the surface of a visual trigger. Eye trackers are used in research on product design and software design in the field of neuromarketing. The most popular method of measuring eye movement is through the use of a camera which tracks the movements of the pupil. We use custom-made eye tracking devices and software developed by engineering team. Neuro Marketing Tools Recording Metabolic Activities in Brain Positron Emission Tomography (PET) Functional Magnetic Resonance Imaging (fMRI) Recording Electrical Activities in Brain Electroencephalography (EEG) Magneto encephalography (MEG) Steady State Topography (SST) Transcranial Magnetic Stimulation (TMS) Without recording Brain activities Eye Tracking Skin Conductance Facial Coding Facial Electromyography.
- ❖ **Cognitive Analysis:** Cognitive Analysis is an analytic digital model that combines the results obtained through EEG, galvanic skin response and eye tracking to give a holistic view of a person's reaction to a particular trigger. This ensures there is no mis-reading in any of the biometric readings taken.

- **Functional magnetic resonance imaging (fMRI):** fMRI The term MRI stands for 'magnetic resonance imaging' and basically describes a tool, which makes an anatomic representation of the brain by making use of magnets (Postma, 2012). An MRI scanner is used to measure the blood oxygen level, which can give an indication of increased brain activity in certain regions (Ariely, & Berns, 2010). The measurement works as follows: The magnetic field is able to recognize the blood oxygen content in the brain. Therefore, if neural activity in a certain brain area is increasing, the oxygen rich blood increases too because oxygen is required by the brain to work. fMRI is a form of non-invasive neuroimaging technology that is primarily used for marketing purposes. The interest in it has increased enormously during the past years since it makes it possible to isolate certain systems of neurons that are connected with specific functions of the brain (Postma, 2012; Wilson, Gaines, & Hill, 2008). This isolation of the neural system is a highly complex task and is only facilitated by today's advanced technology (Kumlehn, 2011).

- ❖ **Empathic design:** Another method where human beings are being analyzed without making use of any devices is called 'empathic design'. The meaning of the word 'empathic' can be also referred to as sensitive. Within this method, observation is made in the consumer's own environment so that it can take place in the normal course of daily routine (Postma, 2012; Leonard, & Rayport, 1997).

OBJECTIVE: 3 To study the neuro marketing technique of McDonalds with an illustration

McDonald's is an American fast food company, founded in 1940 as a restaurant operated by Richard and Maurice McDonald's, in San Bernardino, California, United States.

They rechristened their business as a hamburger stand and later turned the company into a franchise, with the Golden Arches logo being introduced in 1953 at a location in Phoenix, Arizona. In 1955, Ray Kroc, a businessman, joined the company as a franchise agent and proceeded to purchase the chain from the McDonald brothers.

McDonald's had its original headquarters in Oak Brook, Illinois, but moved its global headquarters to Chicago in early 2018.

Range of Products and services:

- | | |
|--------------------------------|--------------------------------|
| ✓ McDonald's Chicken McNuggets | ✓ McRib |
| ✓ McDonald's Big Mac | ✓ Big N'Tasty |
| ✓ Filet-O-Fish | ✓ McGriddles |
| ✓ Happy Meal | ✓ McMuffin |
| ✓ McDonald's Quarter Pounder | ✓ McChicken |
| ✓ KiwiBurger | ✓ McPremium line |
| ✓ McArabia | ✓ McAfrika |
| ✓ Arch Deluxe | ✓ McDonald's Deluxe line etc., |

Product selected for the study - Mc.Muffin

McMuffin is a family of breakfast sandwiches sold by the international fast food restaurant chain McDonald's.

The Egg McMuffins is the **signature sandwich**, which was invented in 1972 by Herb Peterson to resemble eggs Benedict, a traditional American breakfast dish with English muffins, ham, eggs and Hollandaise sauce.

Neuro marketing technique used by McDonalds to promote Mc.Muffin - Eye-Tracking.

Eye tracking technology is used to track the eye positioning as its focus shifts along the surface of a visual trigger. Eye trackers are used in research on product design and software design in the field of neuromarketing. The most popular method of measuring eye movement is through the use of a camera which tracks the movements of the pupil.



Image of McMuffin after using Neuro Marketing strategy

McDonalds to promote its one of the range of its products i.e., McMuffins uses eye- Tracking strategy of Neuro marketing and its implication on the consumer buying behavior is as follows.

- The **oversized, detailed McMuffin** quickly draws consumer attention. Market research studies using neuroscience have shown that consumers better emotionally respond to more detailed foods they're familiar with.
- The **left placement of the McMuffin** on the billboard actually helps our brains better perceive the image faster. Objects placed on the left side of our field of view are better processed using the right side of our brains and vice versa. This is because our optic nerves criss cross when they enter our brain. The right side of our brain is better at perceiving images. The left side of our brain is better at processing numbers and writing. The image placement and writing in this ad are placed in the best spots possible for our brains to process this information effectively and efficiently. Because ,the optic nerve criss-crosses when it enters your brain, your left field of

view best feeds to your right, artistic side of your brain, and the right field of view feeds to the left, analytic side of your brain.

- The **text is in lowercase font making it uniform**. Visually, this is preferred because the brain likes consistency. Because of how we read when a text is properly capitalized we're prompted to look for more semantic meaning like if we were reading a textbook.
- The **message is simple**. Perhaps the most difficult thing in marketing and business development is making a concise, influential statement. This billboard speaks to a very common buying focus of consumers when it comes to food – calories and nutrition. In just four words you are now aware a McMuffin is only 300 calories. Remember the principle of cognitive fluency – the easier it is to think about something the easier it is to act upon something.
- The **design is contrasting**. It may seem like common sense but the brain loves clear contrast. The human brain is extremely visual, so the fact that the image and font pop off the background are more helpful to perception.

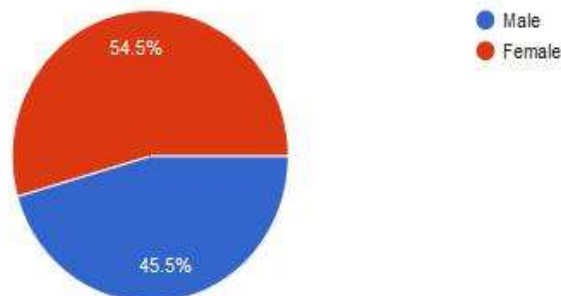
OBJECTIVE:4 To study the implication of Neuro marketing technique on success of McDonalds.

i) Gender category

Table 1: Distribution of respondents based on Gender

Gender	No. of Respondents	%
Male	61	54.5%
Female	51	45.5%
Total	112	100%

Chart showing Distribution of respondents based on Age group



Interpretation

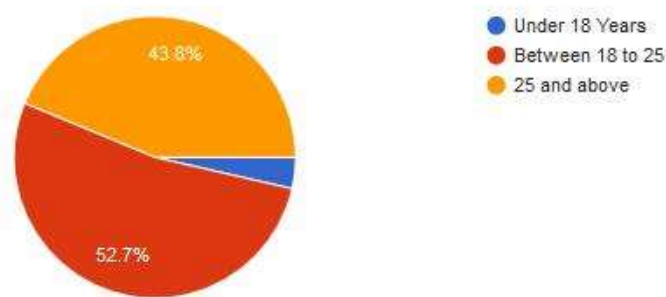
The above table depicts the respondents responded to the questioner's sent through the social media for the various individuals from Bangalore city. Out of these there were 54.5% of females and 45.5% of males who responded for the questions.

ii) Age - Group

Table:2 Distribution of respondents based on age group

Age Group	No. of Respondents	%
Under 18 years	4	3.6%
Between 18 to 25	59	52.7%
25 years and above	49	43.8%
Total	112	100%

Chart showing Distribution of respondents based on Age group



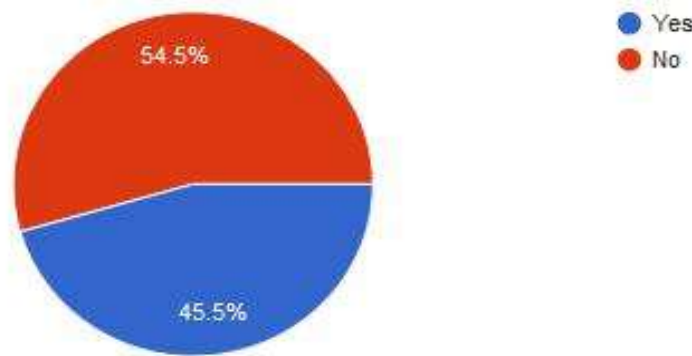
Interpretation

The above analysis shows that a significant proportion i.e., 52.7% of the respondents surveyed were **between the ages of 25 and above**, 43.8% belong to the age group of 18 to 25; and the remaining 3.6% belongs to the age group of under 18 years.

iii) Awareness on Neuro marketing

Table 3: Distribution of respondents based on the awareness of neuro marketing

	No. of Respondents	%
Yes	51	45.5%
No	61	54.5%
Total	112	100%

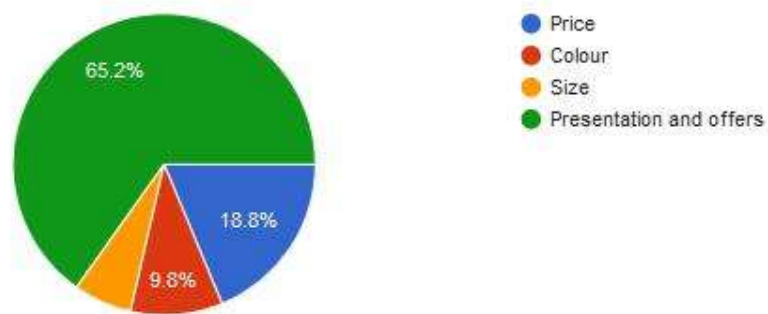
Chart showing Distribution of respondents based on the awareness of neuro marketing**Interpretation**

The above analysis reveals that significant portion of respondents i.e., 54.5% were aware of the neuro marketing strategy whereas the remaining 45.5% were not aware of the concept of neuro marketing.

iv) Factors influencing customer's decision making process

Table 4: Distribution of respondents based on factors influencing customer's decision making process

Particular	No. of Respondents	%
Price	21	18.8%
Colour	11	9.8%
Size	7	6.3%
Presentation and offers	73	65.2%
Total	112	100%

Chart showing Distribution of respondents based on factors influencing customer's decision making process**Interpretation**

The above analysis shows that majority I.e., 65.2% of respondents get attracted by the presentation and offers, 18.8% by price of the product, 9.8% by the color and the remaining 6.3% by the size of the products being offered which is the least among all.

Table 5: Distribution of respondents based on the familiarity of McDonalds logo

Particular	No. of Respondents	%
Image 1	99	94.3%
Image 2	6	5.7%
Total	105	100%

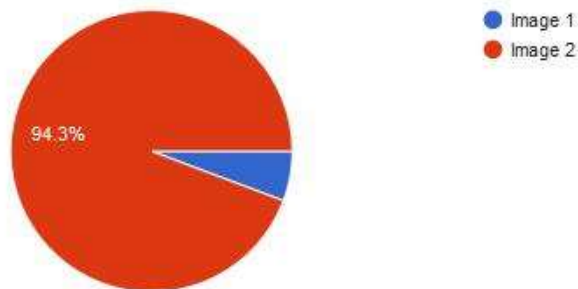


Image 1



Image 2

Chart showing the respondents based on the familiarity of McDonalds logo



The above graph reveals the fact that 94.3% of respondents were familiar with the image 2 of the McDonald's which depicts the logo that they could recognize easily as a result of neuro marketing strategy- Eye tracking.

Table 6: Distribution of respondents based on the best welcome gesture of McDonalds Mascot

Particular	No. of Respondents	%
Image 1	92	92%
Image 2	8	8%
Total	100	100%

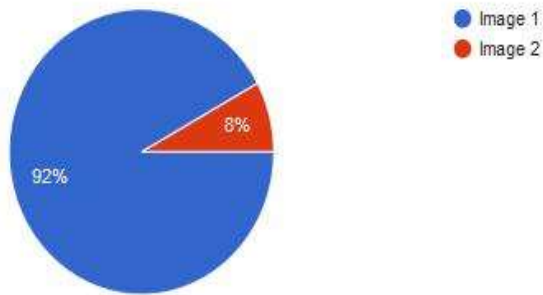
Image 1



Image 2



Chart Showing the respondents based on the best welcome gesture of McDonalds Mascot



The above graph reveals the fact that 92% of respondents choose the image 1 which gave the best welcome gesture compare to image 2. **Table 7: Distribution of respondents based on the selection of the menu card**

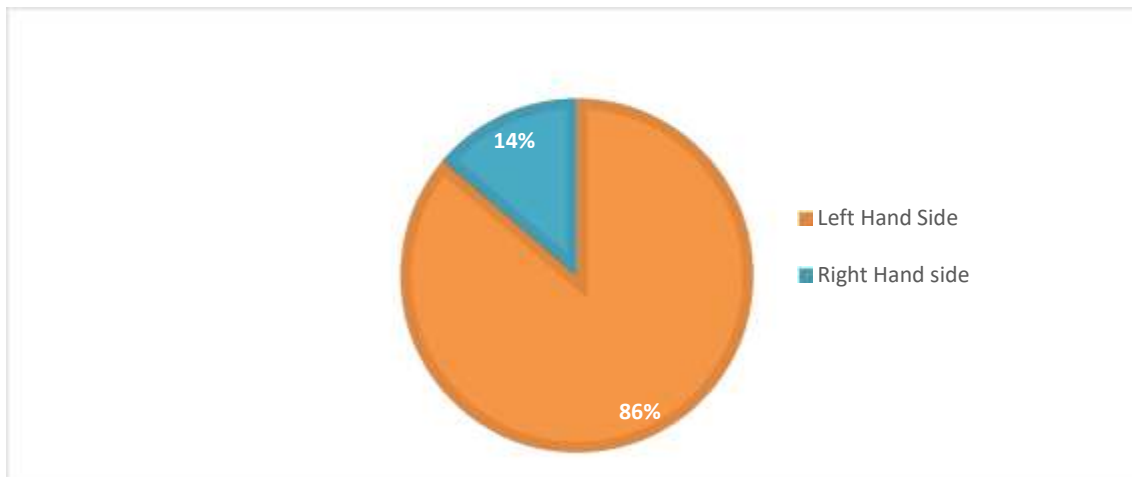
Particular	No. of Respondents	%
Left hand page	88	86.27
Right hand page	14	13.73
Total	102	100%

Right side

Left Side



Chart showing the respondents based on the selection of the menu card



The above analysis shows that 86% of the respondents had selected the left hand side of the menu card which was more delightful according to them than compared to the right hand side of the menu for which 14% of the respondents voted.

Table 8: Distribution of respondent's opinion based on the Neuro Marketing strategy: Eye-Tracking used by McDonald's.

Questions	Agree	Partially Agree	Disagree	Total
1. McDonald's is using Neuro Marketing strategy	59	43	8	110
2. Bill Board Advertisements of McDonald's on Highways is an effective technique of neuro marketing	68	34	7	109
3. Presentation strategy is a strength of McDonald's	65	39	3	107
4. Icon of Golden Arches of McDonald's is a tool of Neuro Marketing. [Note: The golden arches of McDonald's is said to be the most recognizable symbol in the world].	69	33	6	108

Interpretation :

The above table reveals the responses of respondents for neuro marketing strategy: Eye-Tracking used by McDonald's:

Statement 1: McDonald's is using Neuro Marketing strategy:-

Significant portion i.e., 59% of respondents agrees, 43% partially agree and 8% disagree.

Statement 2: Bill Board Advertisements of McDonald's on Highways is an effective technique of neuro marketing:-

Majority of respondents i.e., 68% agrees, 34% partially agrees and the remaining 7% disagrees. **Statement 3:** Presentation strategy is a strength of McDonald's.

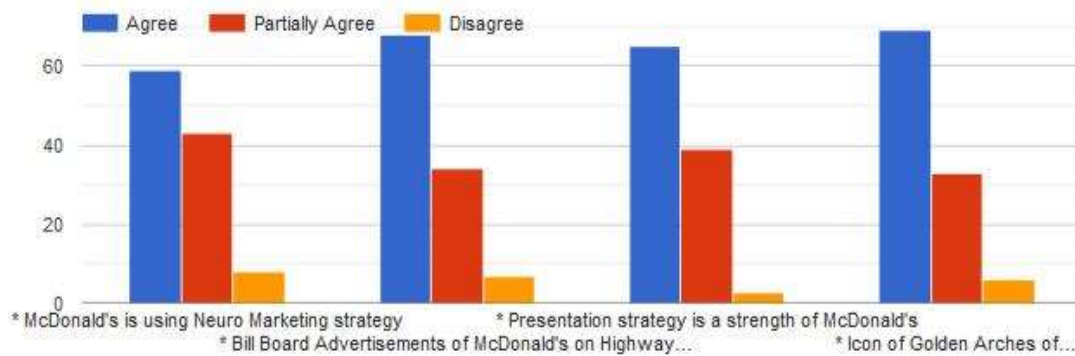
Significant portion i.e., 65% agrees, 39% partially agrees and the remaining 3% disagree.

Statement 4: Icon of Golden Arches of McDonald's is a tool of Neuro Marketing. [Note: The golden arches of McDonald's is said to be the most recognizable symbol in the world].

Majority of respondents i.e., 69% agrees, 33% partially agrees and the remaining 6% disagrees.

Hence, we can conclude from the above analysis that Most of the respondents agrees that yes, McDonald's using Neuro marketing strategy to promote their Product to attract and to retain the customers to enjoy the competitiveness and being the leader in the market.

Chart Showing the respondent's opinion based on the Neuro Marketing strategy: Eye-Tracking used by McDonald's.



VII. SUGGESTIONS:

The consumers mind will be continuously evolving and changing their buying behavior, companies have turned to science to keep up the same. Though there are many strategies to study, and opportunities to explore a lot of research need to be conducted to understand the behavior of the consumers.

Neuromarketing is a relatively new player in the realm of business. However, the effects and results of neuromarketing have been impressive, to understand the customers buying pattern.

It is proven with the study conducted that McDonald's is using Eye-Tracking technique of neuro marketing has its success mantra to be the leader in the market to attract the new customers and also to retain the present customers.

It is recommended to the company to use other tools and techniques of neuro marketing to understand the better perspective of customers in order to identify the factors influence their buying pattern that stimulate their sub-conscious level to get attached to company's product emotionally.

VIII.CONCLUSION:

Study reflects and proof the stance and emergence of neuromarketing as a new tool to market research as the tapping of brain sense of the consumer is utilized in the advertising and attracting them to further buying. Apart from McDonalds Companies like BBC, Coca Cola, Ford, Heinz, Intel and L'Oreal, P&G, Hundai, Microsoft, Yahoo, Ebay has been already adopted the neuromarketing as a tool of market research.

For getting better results of marketing research Companies are hiring the outsourcing services of companies like NeuroFocus , Neuro---Insight, Neurosense and Bright house. Managers also need to invade this emerging trend of marketing for positioning there brand in the subconscious mind of their consumers.

All those companies experts in nueromarkting have been developing the various techniques of nueromarketing with the application of neuroscience as FMRI, EEG, Eye Tracking, GSR, Empathy Design and Cognitive Analysis. Thus nueromarketing will have a great potential for the marketers in the coming years.

References:

[file:///C:/Users/acer/Downloads/Neuromarketing An Emerging Tool of Marke%20\(3\).pd f](file:///C:/Users/acer/Downloads/Neuromarketing%20An%20Emerging%20Tool%20of%20Marketing.pdf)

<https://profitworks.ca/blog/marketing-strategy/541-how-mcdonalds-became-the-leader-fast-food-industry-marketing-strategy.html>

<https://2stallions.com/five-neuromarketing-tips/>

<https://social-brain.com/2012/06/13/neuromarketing-and-mcmuffins/>

<https://www.neurosciencemarketing.com/blog/articles/dietary-decoys.htm>

<https://2stallions.com/five-neuromarketing-tips/>

<https://www.neurosciencemarketing.com/blog/articles/starbucks-mcdonalds.htm#>