CHAPTER 4
RESEARCH METHODOLOGY

In a layman language, research methodology can be defined as research work carried through systematic methodology. It is a procedure to provide logical explanations behind the methods applied for conducting the study, so that the research results generated can be evaluated and analysed for research purposes by other researchers. Research methodology is a way systematic way to solve the research problem. Therefore in order to conduct the research on ‘Effect of Online advertising on Consumers: An Analysis’, the following two research methods were adopted for data collection and its analysis:

a) Content Analysis

b) Survey

![Figure 4.1 Research methods used for study](image)

4.1 Content Analysis

Content analysis refers to the technique that helps to analyze the actual data that can be of any kind, whether a word, picture, theme, and text and tries to present the content in objective and quantitative manner.
(Berelson, 1952) defined content analysis as a research technique used for the objective, systematic and quantitative description of manifest content of communication (Franzosi, 1991).

(Weber, 1990) says “Content Analysis is a research method that uses a set of procedure to make valid inferences from text. These inferences are about sender(s) of message, the message itself, or the audience of message” (Franzosi, 1991).

This method is used to study the content in context to piece of writing, photographs, cartoons, advertisements, visuals or any occurrence of recorded communication. It is applied in various fields like marketing, social science, political studies, media studies and many such areas to study the trends or changing patterns.

### 4.2 Theoretical Framework for the Research

Communication is the radical element in all the medium (newspaper, TV, Radio or Internet) till date that includes the sender, message and receiver but there have been many ad ons by various researchers in this process of communications like channel, feedback, noise, etc. that has elaborated and intensified the process of communication. With 300 years of existence, content analysis was never recognised as a research tool until 1950 when it was introduced by Berelson and Lazarfeld with the first scientific summary of the method. (Holst, 1969) summarised three uses of content analysis:

- Describing the characteristics of communication,
- Making inferences about the antecedents of content
- Making inferences about the effects of communication.

Harold Lasswell as a researcher provided valuable inputs in context to media content analysis initially to study propaganda which later used for other media studies as well. Hence the most appropriate theory that fits into this research is the one given by Harold Laswell. In his model, he explained the questions asked during the process of communication that is made up of statement like who is saying? What is being said? Who is being affected? , where content i.e. ‘What is being said’ is analysed as content. (J. Macnamara, 2003).
The components of this theory can be understood as follows for this research study. Therefore ‘who’ that represents the sender or source that control the messages stands for marketer, advertiser or online strategist whereas ‘says what’ i.e. message refers to the content posted on homepages of the websites. ‘Channel’ represents the medium of carrying the message i.e. internet and to ‘whom’ stands for audience/consumer or netizens and the last component ‘with what effect’ studies the effect of message through feedback given by the consumer.

<table>
<thead>
<tr>
<th>Question</th>
<th>Element</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Communicator</td>
<td>Control Analysis</td>
</tr>
<tr>
<td>Says What?</td>
<td>Message</td>
<td>Content Analysis</td>
</tr>
<tr>
<td>In which channel?</td>
<td>Medium</td>
<td>Media Analysis</td>
</tr>
<tr>
<td>To whom?</td>
<td>Audience</td>
<td>Audience Analysis</td>
</tr>
<tr>
<td>With What effect?</td>
<td>Effect</td>
<td>Effects Analysis</td>
</tr>
</tbody>
</table>
4.3 Selection of Websites

Though numerous research studies have been conducted with context to political, business and library websites but information websites remain unexplored that researcher has undertaken for the study. Various research agencies like Alexa, a research agency of Amazon; Comscore and Audit Bureau of Circulation were consulted for the selection of these ten websites. Therefore, content analysis was selected as method for analysing the content of selected websites and homepage of the selected websites was taken as unit of analysis.

An online pilot study was conducted by the researcher among 110 respondents out of which 102 respondents filled the survey and 8 skipped it. This pilot study was conducted in order to shortlist the websites for the study to just four websites. Ten websites based on popularity were selected for the pilot study and top four websites based on data collected was selected for the study. Social networking sites and electronic news channel sites were not considered as the focus was on informational websites. Therefore, Yahoo.com and Rediff.com and Hindustan times and Times of India were selected for the study.

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Facebook</td>
<td>71.57% 73</td>
</tr>
<tr>
<td>b) Youtube</td>
<td>53.92% 65</td>
</tr>
<tr>
<td>c) Twitter</td>
<td>9.80% 10</td>
</tr>
<tr>
<td>d) NDTV</td>
<td>16.67% 17</td>
</tr>
<tr>
<td>e) Aspiak</td>
<td>16.67% 17</td>
</tr>
<tr>
<td>f) Zee News</td>
<td>11.76% 12</td>
</tr>
<tr>
<td>g) Afaqs</td>
<td>3.92% 4</td>
</tr>
<tr>
<td>h) Yahoo</td>
<td>24.51% 25</td>
</tr>
<tr>
<td>i) Rediff</td>
<td>9.80% 10</td>
</tr>
<tr>
<td>j) TOI</td>
<td>11.76% 12</td>
</tr>
<tr>
<td>k) Tribune</td>
<td>9.80% 10</td>
</tr>
<tr>
<td>l) HT</td>
<td>16.67% 17</td>
</tr>
<tr>
<td>m) Linkedin</td>
<td>7.84% 8</td>
</tr>
<tr>
<td>n) Instagram</td>
<td>19.51% 20</td>
</tr>
<tr>
<td>o) Any other(Specify)</td>
<td>7.84% 8</td>
</tr>
</tbody>
</table>

**Total Respondents: 102**

Figure 4.3 Results of Pilot study
Four informational websites were selected on the basis of their popularity and pilot study and these were studied under 17 fixed parameters that have been selected from on review of literature:

- a) Yahoo.com
- b) Hindustantimes.com
- c) Indiatimes.timesofindia.com
- d) Rediff.com

4.3.1 Description of Websites

There are millions of websites available these days in different genres. There is no subject or a brand on which a website is not available. But for its broader classification, websites have been categorised into informational websites, business websites, company websites, brochure websites, etc. As it is very onerous and elaborative to conduct study on all the classification, four websites based on informational pattern and popularity were selected for the study. Therefore, these websites were studied on various parameters

a) Yahoo.com

‘Yahoo’ or ‘Yet another Hierarchical Official Oracle’ can be defined as an informational website that provides information and entertainment to the users. A site that initially started off as a search engine was started in March 1995. With the span of time, it services expanded to web portal, directory, news, finance, groups, mapping, sports and social networking website as well.

As far the layout of Yahoo homepage is concerned, the website follows the Fixed Sidebar layout where side bars on the webpage are fixed and only central page can be scrolled. Yahoo follows the pay per click system for revenue generation and provides services such as banner ads, rich ads, interstitials, skyscraper etc. for the promotion of the brands.
b) Hindustantimes.com

HT Media Ltd commenced its journey in the media world with the inception of newspaper Hindustan Times in 1924. HT Media has various ventures under its umbrella like radio, business newspaper, entertainment channels and internet. Hindustantimes.com, an internet business of HT Media runs under the Firefly e-ventures.

The website follows the headline and Gallery layout for its design that makes the content of the page very appealing and categorized. The website used various advertising formats like banners ads, interstitials, pop ups and pop under. The content of the website contains information about all the categories happening around and is regularly updated whereas also contains the option for epapers circulated in different zones.
c) Indiatimes.timesofindia.com

Times group has been one of the largest media conglomerate and the newspaper Times of India is credited with the first newspaper to start off with the advertising for revenue business model. The website uses every niche of its pixel for imparting the information and entertainment.

![Image of Indiatimes homepage]

Figure 4.6: Print screen of indiatimes.timesofindia.com homepage

d) Rediff.com

Rediff is another popular website that contains information on various genres. The website provides numerous services from search engine, mails, live chat, entertainment, news updates and ecommerce shopping platform.

According to layout of the Rediff homepage, the site is designed on Power Grid format that displays the products and information in grid pattern. As the website has its own ecommerce webpage, therefore the homepage contains just one advertisement of product or service on top of page for longer duration.
4.3.2 Steps for Conducting Content Analysis

Figure 4.8: Steps conducted for Content Analysis

4.3.3 Sampling Design

Four informational websites based on their popularity were selected for the study i.e. Yahoo.com, Rediff.com, Timesofindia.com and Hindustantimes.com. Instead of studying and analysing the complete websites, only the front page i.e. homepage of the websites was taken as unit of analysis and studied as it is the first point of contact by the consumer.
4.3.4 Duration of the Study

Each of the websites was analyzed for a period of one week consecutively so as to study the change in trend of displaying the advertisements on the homepages of these websites.

4.3.5 Selection of Parameters

The parameters or categories for the analyzing the content of the homepages were studied and selected from the review of literature as follows:

a) Type of internet advertisements: The various formats of internet advertisements appearing on homepage.
b) Space: Size occupied by the advertisement as per pixels.
c) Number of advertisements on homepage
d) Product category: The category of the product whose advertisement has been displayed on the homepage.
e) Purchase option: Whether the advertisement contain the option for purchasing product or not.
f) Ad layout: Layout of the online advertisement on which it is designed.
g) Functionality: Whether the online advertisement displayed on homepage, showcases the function of the product advertised or not.
h) Search option: Whether the website provides option for search of product or not.
i) User friendly: Whether the site is easy to access and direct to correct locations or is cumbersome to surf.
j) Page layout: To study the layouts on which the websites has been designed.
k) Information availability: Upto what extent the information is provided on the advertisement that appears on the homepage.
l) Placement of ad: To study the place where the online ad are placed for better visibility.
m) Duration of ad: To what extent the advertisement stays on the homepage.
n) Animation/Effects: Whether visuals and effects are used in advertisements for better appealing.
o) Use of words for persuasion: What kinds of words are used for Call to action on online advertisement.
p) Close option available: Treatment given to the video advertisements through various options appearing on advertisement displayed.

q) Colors: Colors used in the advertisements.

4.4 Survey

A survey method can be defined as systematic data collection tool for gathering the data from individuals taken as sample. This method is commonly used in psychology research to collect data for studying the behaviour and trends among the participants taken as sample.

Therefore, it is very important to ensure the reliability, validity and accuracy of the data collected from survey for its further implications. Standardisation is a vital criterion so that the results of survey can be further identified with larger population.

4.4.1 Types of Survey Data Collection

The population exists in such a diversified manner that a different survey technique is used for collecting the response from different respondents and for different study. Therefore, some of the survey methods practised by market research companies are as follows:

a) **Online (Mail)** - Under this survey technique, questionnaire is mailed to the respondents either through mail or shared on social media platforms. Different formats like Google forms survey monkey, etc. are available to form questionnaires.

b) **Telephone** - The example of a telephone survey could be making a call to the consumer for collecting a feedback about product or service. This type of surveys is generally conducted when the sample size is lesser in number. The respondents are telephoned and asked about their experience related to the product.

c) **Home interviews** - The Census survey in India is a good example of an at-home interview survey administration. Survey is also conducted at home when the people
from certain organization collect the data from the home and treat one home as a sample unit.

4.4.2 Advantages of Surveys

- It helps to collect large amount of data in short span of time through different formats.
- It is also helpful in collection of accurate and wide information on personal attitudes, opinions, perceptions, facts and behaviour.
- It is less expensive in comparison to other data collection techniques.
- The data collected from survey can be easily administered and categorised.

4.4.3 Disadvantages of Surveys

- At places where random sampling technique is used, responses can produce bias results.
- If questionnaire of survey are not properly and effectively designed, its results can undermine a good research work.
- The response of respondents might not provide their clear perception due to the fixed options provided in questionnaire.
- In some survey method, the response of respondents cannot be controlled.

4.4.4 Pilot Study

Pilot study can be defined as be defined as trial run done in order to gauge the final outcome of the complete study. It is a study that is conducted on smaller sample size to pre-test the sample design applied and research instruments like questionnaires, interview schedules or recording schedules for collecting the data.

It is applied as a standard scientific tool for conducting a preliminary analysis before going ahead with completed research study.

The pilot study is applied once the researcher has a clear view regarding research topic, methods and techniques to be implied and what the research schedule will look like. It is “reassessment without tears”, trying out all research techniques and methods, which the
researcher have in mind to see how well they will work in practice. If necessary it can then still be adapted and modified accordingly (Calitz M.G, 2009).

Initially the questionnaire was formed on the Google forms and sent through mail to the probable respondents. The respondents filled it online and after receiving data from 50 respondents, the shortcomings and drawbacks were analysed and questionnaire was reframed. It was again sent to probable respondents and their responses were collected and relevant observations were incorporated and the final questionnaire was designed.

![Diagram showing steps conducted for Survey]

**Figure 4.9: Steps conducted for Survey**

### 4.4.5 Sampling

The study was conducted among netizens i.e. the people who access internet regularly and are aware of changing trends. Hence the sample consisted of the respondents especially pursuing higher studies and into jobs and of different age groups. The minimum age taken for sampling was 18 and the bracket of age group was taken as 8-25 years of age which is of young adults. According to Neilson Norman group report, Young adults refer to group of generation that are born within 1980 to 2000 that grew up with access to digital technology.

The income group bracket was taken from RS 1.5 lakh p.a. considering that below this range in India, The citizen are exempted from filling the return and also rebate or deduction under 80C of ITA (Income Tax Act) is of this much amount. The interval in
each bracket in questionnaire was of Rs. 1 lakh and four options were created to know the respondents economic profile.

A purposive sampling method was used for the study so that all members of population or universe have a fair and equal chance of being selected. It is non probability sampling technique which is selective in nature as each sample has independent chance of being selected for a purpose.

4.4.6 Sample Size

The sample size for collecting the data through survey was set at 500 net respondents. Though the sample size was fixed at 500 but the response received was 650, so the first 500 were considered for the study.

4.4.7 Questionnaire Designing

In order to collect the data through online survey, questionnaire was used as a tool that was designed on Google forms due to its flexible format. The questionnaire was segregated in three parts where first part contained questions pertaining to online advertising, second part had questions related to ad designing and then third part of the questionnaire was related to consumer response to elements of homepage design.

4.4.8 Pretesting of Questionnaire

After framing the questionnaire to check the ambiguity and authenticity of the data to be collected, the researcher got it filled by around 50 respondents to evaluate whether it is generating the desired response or not. Few suggestions regarding framing of questions and options were suggested by the respondents, so the researcher after inculcating the suggestions prepared the final design of the questionnaire.

4.4.9 Data Collection Procedure

The data collected through online questionnaire technique was quite a cumbersome process. The link of the online questionnaire developed through Google forms was circulated to respondents through e-mails, whatsup and also shared on social networking forums like Facebook, twitter and LinkedIn for collecting the data.
4.4.10 Analysis of data

After collecting the data through Google forms and transferring it to excel sheet, the data was represented on percentage basis in the graphically format. Also SPSS was applied for getting the statistical results and Chi square test was applied to investigate the significance among respondents on different parameters.