CHAPTER 4
RESEARCH METHODOLOGY

4.1.1 INTRODUCTION:

For carrying out "A Study of Influences of Consumer Products’ Advertising through Social Networking Websites on Buying Behavior", it is imperative that an appropriate Research Methodology is followed. This paper attempts to provide an overall design of the study with procedural and details of the research undertaken. The statement of the problem, objective of the study, hypothesis of the study, limitations and delimitations of the study, the population and sample of the study, as well as source of the data and their collection, tools used and the degree of validity and reliability, Method of data collection have been elaborated in this study.

Social Networking Sites like, Facebook, Twitter, Linked In, Google Plus, etc., now a days, have become an integral part of life of every individual. The young generation of India, which constitutes majority portion of Indian population, is termed as major market force by Indian as well as Global Business houses. The young generation is techno savvy and is dependent on various technological devices for availing information inputs for all aspects related to the life.

The out performance of advertisement on various Social Networking Sites in terms of meeting advertising objectives of creating awareness, interest and converting the potential buyers into actual buyers has compelled all business tycoons to re-plan and re-design their advertising strategy including advertising outlays.

Business decisions take into account customer intelligence to generate customer driven and collaboratively designed products that are simply more successful and profitable. The tools, platforms, and technologies like social networking sites are used to operationalize and capture collaborative activities. That’s the whole notion of social business. Now a day the business is the
Social Stallion, kicking down the walls between the marketer and the customer which used to separate the business from their customers.

Social technologies, on a mass scale, connect people in ways that facilitate sharing information, thereby reducing the opportunities for marketplace exploitation. The Social Web exposes the good, the bad, and the ugly, simultaneously raising up what works and putting down what doesn’t, without any regards for the interests of any specific party. The larger idea of social technologies applied at a “whole-business” level. Hence, one can think of this deeper and customer driven connection between operations and marketing as “Social Business”.

This new social connectivity applies between a business and its customers (B2C), between other businesses (B2B), between customers themselves, as is the case in support communities and similar social applications, and just as well between employees. Information that previously was available to only a selected or privileged class of individuals is now open to all.

4.1.2 Statement of the Problem:

Social media marketing seeks to engage customers where they naturally spend their time. Social business picks up on what customers are talking about and connects this back into business where it can be processed to create the next round of customer experiences. No more sweeping consumer’s problems under the rug in the Customer Care department – active social listening, understanding consumer sentiment, and having a social policy are baseline of smart business practices in the twenty first century. Out of all this, the researcher sought to study and register down the one important side of this changing buying behavior as a result of influence of advertisement on social networking sites, “A Study of Influences of Consumer Products’ Advertising through Social Networking Websites on Buying Behaviour”.

An attempt has been made to find the answers of following question:
4.1.3 Main Question:

To what an extent the consumer products’ advertisement on social networking sites influences the buying behavior of consumers?

We can clear the research problem through following questions.

1. Do the users of the social networking sites have awareness about the consumer products’ advertisement appears on social networking sites?

2. Does the consumer products’ advertisement appearing on the social networking sites attract the attention of the users of social networking sites?

3. Are the consumer products’ advertisement effective enough to create interest of users in the products appearing on the social networking sites?

4. Do the users of social networking sites go through the content of consumer products’ advertisement appearing on the social networking sites?

5. Do the users of social networking sites find relevant / necessary products through the consumer products’ advertisement appearing on the social networking sites?

6. Do the social networking sites provide relevant / necessary information pertaining to competing products?

7. Do the users of social networking sites compare relevant / necessary consumer products of various brands appearing on the social networking sites?

8. Do the users of social networking sites purchase the consumer products of various brands appearing on the social networking sites?

9. How frequently the users of social networking sites purchase the consumer products of various brands appearing on the social networking sites?
10. Do the consumer products' advertisement on social networking sites induce the consumers to buy unnecessary products?

11. Do the products purchased on the basis of consumer products' advertisement on social networking sites are meeting the quality standards claimed?

12. Do the customers who purchased the products on the basis of consumer products' advertisement on social networking sites recommend others / friends to purchase the same product?

13. Are the consumer who purchased the products on the basis of consumer products' advertisement on social networking sites satisfied?

14. Do the consumer who purchased the products on the basis of consumer products' advertisement on social networking sites get after sales services?

15. Are the customers of consumer who purchased the products on the basis of consumer products' advertisement on social networking sites satisfied with after sales services?

16. Do the e-marketers of consumer products advertise their products and sites through social networking sites?

4.1.4 Rationale of the study:
Now a days, internet has become the part of social as well as business life. Social Network Sites are accessible through internet only. These social networking sites have been gaining importance by business houses for effective advertising their products at cheaper rate. The viewers of the social networking sites come across such advertisement. The researcher intends to study the Influences of Consumer Products Advertising through Social Networking Sites on Buying Behaviour of Consumers. The following benefits of Social Networking Sites justify the Study:

01. Increased awareness of the organization

02. Increased traffic to website
03. Greater favorable perceptions of the brand
04. Able to monitor conversations about the organization
05. Able to develop targeted marketing activities
06. Better understanding of customers perceptions of their brand
07. Improved insights about their target markets
08. Identification of positive and negative comments
09. Increase in new business
10. Identification of new product or service opportunities
11. Ability to measure the frequency of the discussion about the brand
12. Early warning of potential product or service issues

4.2.1 Research Objectives:

Research Objectives:

Major Objective
To analyze the extent of influence of the consumer products' advertisement on social networking sites on the buying behavior of consumers.

1. To study the level of the awareness among users of social networking sites about the consumer products' advertisement appearing on social networking sites.

2. To examine whether the buying decisions are solely based on advertisement appearing on social networking sites.

3. To evaluate the extent of effectiveness of consumer products' advertisement to create interest of users in the products appearing on the social networking sites.

4. To find out whether the advertisement appearing on social networking sites provides adequate information about the product/services in which consumers are interested.

5. To analyze whether the users of social networking sites find relevant/necessary products through the consumer products' advertisement appearing on the social networking sites.
6. To examine whether the social networking sites provide relevant / necessary information pertaining to competing products.

7. To study whether the users of social networking sites carry out comparison of relevant / necessary consumer products of various brands appearing on the social networking sites by the users of social networking sites.

8. To examine whether the users of social networking sites purchase the consumer products of various brands appearing on the social networking sites.

9. To analyze the frequency of purchasing of various brands of consumer products appearing on the social networking sites by the users of social networking sites.

10. To examine whether the consumer products' advertisement on social networking sites induce the consumers to buy unnecessary products.

11. To study whether quality standards of products purchased through the advertisement appearing on the social networking sites are matched with the claim.

12. To examine whether the customers who purchased the products on the basis of consumer products' advertisement on social networking sites recommend to others / friends to purchase the same product.

13. To study the satisfaction level of the consumer who purchased the products on the basis of consumer products' advertisement on social networking sites.

4.2.2 Benefits of the Study:

(1) This study attempted to contribute to the literature on the influence of consumer products' advertisement appearing on social networking sites.

(2) The study contributes to a better understanding of influence of consumer products' advertisement appearing on social networking sites and the buying behaviour.
(3) This study helps to understand how the corporate houses determine their target market for the purpose of advertisement on social networking sites.

(4) This study helps to determine the perception of the consumers about the consumer products' advertisement appearing on social networking sites.

(5) This study contributes to corporate houses specially dealing with consumer products to device effective marketing strategies with special reference to advertisement on social networking sites considering the target population who frequently use social networking sites.

4.2.3 Research Design:

Research design for this study is combination of Descriptive and Analytical in nature. Descriptive is due to the fact finding characteristics of users of social networking sites and its relationship with consumer products' advertisement and its influence on buying behaviour.

The study is Analytical due to the characteristic of its Analysis. It involves a sound and scientific analysis of data with the help of measures of central tendency, measures of variation, hypothesis testing and the regression analysis.

Considering the nature of research, the Descriptive Research Design has been used by the researcher.

4.2.4 Data Collection:

Secondary Data: Secondary Data have been collected from various Journals, Magazines, Web-sites and Published Sources.

Primary Data: Primary Data have been collected with the help of structured non-disguised questionnaire from the respondents who are referring Social Networking Sites for availing information about the products to be purchased by them. Questionnaire contains four sections. The First section of the questionnaire pertains to demographic profile of the respondents. The Second section of the questionnaire incorporates questions pertaining to consumer
products’ advertisement and its effectiveness appearing on social networking sites. The third section of questionnaire is about questions related to buying behaviour and influences of advertising on social networking sites on buying behaviour of respondents under study. The fourth section of the questionnaire contains the questions related to the AIDA model.

4.2.5 Target Population:

All respondents / viewers of Social Networking Sites who are referring Social Networking Sites for availing information through advertisement on Social Networking Sites about the products to be purchased by them.

Target population for this study is the users of the social networking sites of Gujarat, Maharashtra and Goa in general and the selected cities of Gujarat, Maharashtra and Goa in particular.

These four cities are very important in the state of Gujarat for numerous of reasons.

Vadodara is mainly known for The Maharaja Sayajirao University of Baroda, and Navrachana University and other educational institutions like Babaria, Sigma and Parul Institute.

Ahmedabad is mainly known for Gujarat University, Indian Institute of Management and other private educational institutions.

Surat is known for The Veer Narmad South Gujarat University and other private educational institutions.

Vidyanagar is known for Sardar Patel University and other private educational institutions.

These three cities are very important in the state of Maharashtra for numerous reasons.
Mumbai is known for University of Mumbai, Indian Institute of Technology, International Institute for Population Sciences, Narsee Monjee Institute of Management and Higher Studies, Padmashree Dr. D. Y. Patil Vidyapith, SNDT Women’s University, Central Institute of Fisheries Education, Tata Institute of Fundamental Research, Tata Institute of Social Sciences, and University of Petroleum and Energy Studies and other private educational institutions.

Pune is known for University of Pune, Symbiosis International University, Bharti Vidyapith University, Yashwantrao Chavan Maharashtra Open University, Dnyaneshwar Vidyapeeth and other private educational institutions.

Nagpur is known for Nagpur University and other private educational institutions.

Goa is known for The Goa University and other private educational institutions.

Thus, the target population of the study is mainly divided in the cities where the education at the higher level and chances of having access to internet and social networking sites is assumed to be higher.

4.2.6 Sampling Techniques:

Multistage sampling with the combination of stratified, convenience and snow ball sampling has been used for this study due to the data requirement and its diversity. No other sampling techniques are found to be more appropriate than the above mentioned sampling techniques.

With the help of stratified sampling the state of Gujarat, Maharashtra and Goa are divided into various strata and taken a few among them on the basis of some unique characteristics. Again the city divided into substrata on the basis of its similar characteristics.
Among the various strata which have been identified for this study convenience sampling have been used to identify the users of social networking sites ready to act as a sample and provide the necessary information as per the requirement of the researcher. Lastly from the convenient users of social networking sites, identified as a sample, snowball sampling has been used to further identify the other users of social networking sites to act as a sample for the study.

Table 4.1 Sampling Techniques

| Target Population | Sample | Stratified | Convenience | Snowball |

4.2.7 Sample Size:
Calculation of Sample size for this study is very difficult due to the huge number of police personnel in target population (Numerically). But still with the consultation of experts across Gujarat (IIMA, IMNU and MSU) in this area, researcher have just tried to find out the reasonable number which is considered as true representative of that particular cities in the state of Gujarat. As per the direction of Dr. Uma Sekaran in “Research Methodology” published by Wiley India, “Sampling Techniques” by William G. Cochran published by Wiley India and with the expert advice in consultation with research guide the number of total respondent has been decided.

Hence keeping in mind the difficulty level the total number of sample size for this study have been taken 1500 respondents i.e. the users of social networking sites of the selected cities in the state of Gujarat, Maharastra and Goa. The below mentioned Table shows the city wise distribution of sample size for this study.
4.2.8 Reliability and Validity of the Study:

The study is valid if its measures actually measure what they claim to and if there are no logical errors in drawing conclusions from the data (Garson, 2002). Therefore different steps were taken to ensure the validity of the study. The theories that have been selected for the study was clearly described and research question has been formulated based on the previous theories. To check the content validity of the questionnaire various expert in the field of academics and the psychologist from the different organization were contacted and the components of questionnaire were modified as per their instructions.

According to Garson (2002), reliability is a measure if the extent to which an item, scale or instrument will yield the same score when administered in different times, location or population, when the two administrations do not
differ in relevant variables. The objective is to make sure that if another investigator will follow the same procedures and used the same case study objects, the same conclusion would be made.

Cronbach’s Alpha Reliability Index was used to evaluate internal consistency of each construct. Hair et al. (1998) suggests that that acceptable level of reliability index should be maintained at a minimum of 0.5 in order to satisfy for the early stages of research; and over 0.7 is considered to be a good level.

<table>
<thead>
<tr>
<th>Table 4.3 Reliability Statistics</th>
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<tr>
<td>Cronbach's Alpha</td>
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<tr>
<td>.954</td>
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Over all reliability for this study have been calculated and found to be 0.954 which is considered as the excellent level for the further analysis of data

4.2.9 Variables under Study:

**Independent Variables**
1) Consumer Products Advertising on Social Networking Sites.

**Dependent Variables**
1) Demographic Variables of respondents.
2) Awareness among viewers / respondents of Consumer Products Advertising.
3) Interest of viewers / respondents for Consumer Products.
4) Purchase Desire of viewers / respondents for Consumer Products.
5) Purchase decision of viewers / respondents for Consumer Products.
6) Influence on buying behaviour of consumers.
Table 4.4 Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>DEPENDENT VARIABLE</strong></td>
<td></td>
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<tr>
<td>PURCHASE INTENTION</td>
<td>Purchase Intention</td>
</tr>
<tr>
<td>SPENDING</td>
<td>Size of purchase on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td><strong>PREDICTIVE VARIABLE</strong></td>
<td></td>
</tr>
<tr>
<td>EXPOSURE</td>
<td>Frequency of usage of social networking sites</td>
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<tr>
<td>EXPERIENCE 1</td>
<td>Experience as user of social networking sites on computer.</td>
</tr>
<tr>
<td>EXPERIENCE 2</td>
<td>Experience as user of social networking sites on mobile.</td>
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<tr>
<td>SHOPPING ORIENTATIONS</td>
<td>Reasons for purchasing products on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td>SATISFACTION</td>
<td>Extent to which the products purchased on the basis of consumer products' advertisement on social networking sites meets the expectations.</td>
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<tr>
<td>MOTIVATOR</td>
<td>Use of consumer products' advertisement on social networking sites as an information channel for traditional purchasing.</td>
</tr>
<tr>
<td>RPRODUCT</td>
<td>Perceived product risk as obstacle to purchase on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td>RFINANCE</td>
<td>Perceived purchase financial risk for products purchased on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td>RPSYCHOLOGY</td>
<td>Perceived purchase psychological risk for providing personal details online at the time of payment for products purchased on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td>RSOCIAL</td>
<td>Perceived purchase social risk for products purchased on the basis of consumer products' advertisement on social networking sites</td>
</tr>
<tr>
<td>RTIME</td>
<td>Risk to time wasting as obstacle to purchase the consumer products on the basis of consumer products' advertisement on social networking sites</td>
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Variables in the CHAID analysis (Chi-squared automatic interaction detection)

**Segmentation variables**

<table>
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<tr>
<th>Dependent Criteria</th>
<th>Common segmentation variables</th>
<th>Specific segmentation variable</th>
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<tbody>
<tr>
<td><strong>Demographic Segmentation</strong></td>
<td>- Age and Gender</td>
<td>- Visitor of social networking sites</td>
</tr>
<tr>
<td>Relevant variables for identifying the social networking site users</td>
<td>- Size of family and family life cycle</td>
<td>- Knowledge about the social networking sites.</td>
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<td></td>
<td>- Income and Job</td>
<td>- Tracking of shipment of products</td>
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<td></td>
<td>- Education</td>
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<tr>
<td></td>
<td>- Generation</td>
<td></td>
</tr>
<tr>
<td><strong>Geographical segmentation</strong></td>
<td>- Western Region States</td>
<td>- Social Networking Site Users</td>
</tr>
<tr>
<td>Physical location of social networking sites</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gujarat : Ahmedabad, Vadodara, Surat, Vidyanagar</td>
<td></td>
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<tr>
<td>Maharashtra : Mumbai, Pune, Nagpur, Goa, Panji</td>
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<tr>
<td><strong>Psycho-graphical segmentation</strong></td>
<td>- Social class</td>
<td>- Attitude towards privacy of data and security</td>
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<tr>
<td>Attitude towards the social</td>
<td>- Life – styles</td>
<td>- Attitude towards delays and</td>
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### Segmentation according to the benefits sought

| Variable associated to purchase motivations - for products available on social networking sites | - Perceived benefits of use of product |
| - Perceived benefits of use of brand |
| - Perceived benefits of using the social networking sites |

| - Benefit from obtaining additional information on the product (search reason, interest in obtaining information) |
| - Benefits looked for in using internet as purchase channel |
| - Problems of distraction while navigating |

### Source

Source: Own production based on Sen et al. (1998)

### 4.2.10 Hypothesis:

1. There is no significant relationship between age and awareness about the consumer products’ advertisement on social networking sites.
2. There is no significant relationship between gender and awareness about the consumer products’ advertisement on social networking sites.
3. There is no significant relationship between educational level and awareness about the consumer products’ advertisement on social networking sites.
4. There is no significant relationship between income level and awareness about the consumer products’ advertisement on social networking sites.
5. There is no significant relationship between occupation and awareness about the consumer products’ advertisement on social networking sites.
6. There is no significant relationship between lifestyle and awareness about the consumer products’ advertisement on social networking sites.
7. There is no significant relationship between age and the users getting attracted towards the consumer products’ advertisement on social networking sites.
8. There is no significant relationship between gender and the users getting attracted towards the consumer products’ advertisement on social networking sites.
9. There is no significant relationship between educational level and the users getting attracted towards the consumer products' advertisement on social networking sites.

10. There is no significant relationship between income level and the users getting attracted towards the consumer products' advertisement on social networking sites.

11. There is no significant relationship between occupation and the users getting attracted towards the consumer products' advertisement on social networking sites.

12. There is no significant relationship between lifestyle and the users getting attracted towards the consumer products' advertisement on social networking sites.

13. There is no significant relationship between age and the interest level of the respondent about the consumer products' advertisement on social networking sites.

14. There is no significant relationship between gender and the interest level of the respondent about the consumer products' advertisement on social networking sites.

15. There is no significant relationship between educational level and the interest level of the respondent about the consumer products' advertisement on social networking sites.

16. There is no significant relationship between income level and the interest level of the respondent about the consumer products' advertisement on social networking sites.

17. There is no significant relationship between occupation and the interest level of the respondent about the consumer products' advertisement on social networking sites.

18. There is no significant relationship between lifestyle and the interest level of the respondent about the consumer products' advertisement on social networking sites.

19. There is no significant relationship between awareness and the users going through the contents of the consumer products' advertisement on social networking sites.

20. There is no significant relationship between interest and the users going through the contents of the consumer products' advertisement on social networking sites.

21. There is no significant relationship between interest and searching out for the product on the consumer products' advertisement on social networking sites.
22. There is no significant relationship between interest and carrying out comparison for the different products on the consumer products’ advertisement on social networking sites.

23. There is no significant relationship between age and purchase of product through the consumer products’ advertisement on social networking sites.

24. There is no significant relationship between gender and purchase of product through the consumer products’ advertisement on social networking sites.

25. There is no significant relationship between educational level and purchase of product through the consumer products’ advertisement on social networking sites.

26. There is no significant relationship between income level and purchase of product through the consumer products’ advertisement on social networking sites.

27. There is no significant relationship between occupation and purchase of product through the consumer products’ advertisement on social networking sites.

28. There is no significant relationship between life style and purchase of product through the consumer products’ advertisement on social networking sites.

29. There is no significant relationship between age and frequency of purchase of product through the consumer products’ advertisement on social networking sites.

30. There is no significant relationship between gender and frequency of purchase of product through the consumer products’ advertisement on social networking sites.

31. There is no significant relationship between educational level and frequency of purchase of product through the consumer products’ advertisement on social networking sites.

32. There is no significant relationship between income level and frequency of purchase of product through the consumer products’ advertisement on social networking sites.

33. There is no significant relationship between occupation and frequency of purchase of product through the consumer products’ advertisement on social networking sites.

34. There is no significant relationship between life style and frequency of purchase of product through the consumer products’ advertisement on social networking sites.
35. There is no significant relationship between the age and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

36. There is no significant relationship between the gender and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

37. There is no significant relationship between the educational level and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

38. There is no significant relationship between the income level and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

39. There is no significant relationship between the occupation and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

40. There is no significant relationship between the lifestyle and the purchase of unnecessary products through viewing the consumer products' advertisement on social networking sites.

41. There is no significant relationship between the level of satisfaction and the recommendation of the product to others through viewing the consumer products' advertisement on social networking sites.

42. There is no relationship between ad-effectiveness and buying decision.

Above Hypothesis have been merged, wherever necessary for testing purpose. At the time of analysis, necessary care have been taken for meaningful findings based on the information gathered from respondents.

4.2.11 Limitations of the Study:

1) The Time Constraint is one of the limitations as the data will be collected from viewers of Social Networking Sites within the period of one year.

2) The Cost Constraint is limiting factor as the increased sample size increases the cost of data collection.

3) The sample size may not adequately represent the entire population.

4) The advertisements on Social Networking Sites only are considered. Hence, the results may not be applicable to other advertising media.
4.2.12 Statistical Techniques:
For analysis and interpretation, following statistical tools and techqnies have been used:

1) Frequency Distribution, Cross Tabulation and Percentage: used for meaningful comparison among various states as well as places of the states.

2) Measures of Central Tendency and Dispersion: used for arriving at mean and dispersion i.e. variation from the mean among various respondents.

3) Correlation and Regression Analysis: used to establish cause and effect relationship between dependent and independent variables along with functional relationship for prediction of dependent variable on the basis of various independent variable responsible as influencing variables for prediction of dependent variable, thereby evolving regression model.

4) Factor Analysis: used to identify loading and importance of various factors under study.

5) Analysis of Variance: used to analyzed variance among various factors under study.

6) Parametric and Nonparametric Test: used for testing of relevant hypothesis.

4.2.13 Delimitations of the Study:

1) The assumption has been made that all the respondents are having access to the internet.

2) It is assumed that all the respondents are the users of social networking sites.