CHAPTER 4: RESEARCH METHODOLOGY

This chapter explains and justify the methodology used for conducting this research project. It begins with explaining the adopted research philosophy, research approach and design. Further it explains the data collection method, sampling technique and sample size, data analysis method and data quality issues. Finally, this chapter acknowledges the limitations and ethical issues of the research.

4.1. Research Objectives

1) To examine the current state of students’ perception about celebrity endorsements.

2) To identify the key attributes of celebrity which might influence students’ purchase intentions through celebrity endorsements.

3) To study effect of celebrity attributes on purchase intentions of college students.

4) To identify the factors which might affect students’ buying behavioural intentions?

5) To study effect of celebrity endorsements on behavioural intentions of college students.

6) To study buying behaviour of college students towards high and low technical products’ endorsed by celebrity.

7) To study effect of celebrity endorsements on overall buying behaviour.

4.2. Research Hypothesis

To summarise the above discussion, it can be concluded that the attributes discussed above are the personal characteristics of a celebrity that marketers use in order to influence student buying behaviour. The main purpose of this study is to find out how these attributes affect students buying behaviour. To be able to fulfil the purpose of this research and answer research questions the Researcher find it appropriate to test the relationship between student purchase intention and attributes discussed above. This led into generating the following hypotheses to test accordingly.
H1: Celebrity endorsements are more attractive.

H1.1: Celebrity endorsement will create high awareness about the product.

H1.2: Celebrity endorsement captures the consumers’ attention easily.

H1.3: Celebrity endorsements create a long lasting impact of product/company in the mind of consumer.

H1.4: Celebrity endorsement products are accepted as testimonial.

H1.5: Celebrity endorsements help to recall the product more promptly at the time of purchase.

H1.6: Celebrity endorsements help to recognise the product more promptly at the time of purchase.

H1.7: Celebrity convinces that price of endorsed product is in your comfort zone.

H1.8: Celebrity endorsed products promise better features.

H1.9: Celebrity endorsed products promise better quality.

H1.10: Celebrity endorsed products promise better Performance.

H1.11: Celebrity endorsed products give edge over the competing brand.

H1.12: Celebrity endorsed products help you to become esteem in your group.

H2: All the extracted factors are reliable and belong to same construct.

H3.1: There is significant correlation between celebrity expertise and purchase intentions.

H3.2: There is significant correlation between celebrity attractiveness and purchase intentions.

H3.3: There is significant correlation between celebrity trustworthiness and purchase intentions.

H3.4: There is significant correlation between celebrity likeability and purchase intentions.

H3.5: There is significant correlation between celebrity product match up and purchase intentions.
H₃.₆: There is significant correlation between negative publicity of celebrity and purchase intentions.

H₃.₇: There is significant correlation between overshadow effect of celebrity and purchase intentions.

H₃.₈: There is significant correlation between another region celebrity and purchase intentions.

H₃.₉: There is significant difference between the mean of expertise and purchase intention.

H₃.₁₀: There is significant difference between the mean of attractiveness and purchase intention.

H₃.₁₁: There is significant difference between the mean of trustworthiness and purchase intention.

H₃.₁₂: There is significant difference between the mean of likability and purchase intention.

H₃.₁₃: There is significant difference between the mean of product match up and purchase intention.

H₃.₁₄: There is significant difference between the mean of negative publicity and purchase intention.

H₃.₁₅: There is significant difference between the mean of overshadow effect and purchase intention.

H₃.₁₆: There is significant difference between the mean of celebrity from another region and purchase intention.

H₃.₁₇: The effect of celebrity – product combination of attributes is positive on purchase intention to buy a product.

   H₃.₁₇.₁: There is positive effect of celebrity expertise on purchase intention of students.

   H₃.₁₇.₂: There is positive effect of celebrity attractiveness on purchase intention of students.
H₃.17.3: There is positive effect of celebrity **Trustworthiness** on purchase intention of students.

H₃.17.4: There is positive effect of celebrity **Likeability** on purchase intention of students.

H₃.17.5: There is positive effect of celebrity **product fit/match** on purchase intention of students.

H₃.18.1: There is positive effect of celebrity **negative publicity** on purchase intention of students.

H₃.18.2: There is positive effect of celebrity **overshadows effect of celebrity** on purchase intention of students.

H₃.18.3: There is positive effect of celebrity from **another region** on purchase intention of students.

H₃.19: Student’s gender has significant effect on the evaluations of celebrity attributes on purchase intention to a product promoted by celebrity.

H₃.19.1: Student’s gender has significant effect on the evaluations of celebrity expertise on purchase intention to a product promoted by celebrity.

H₃.19.2: Student’s gender has significant effect on the evaluations of celebrity attractiveness on purchase intention to a product promoted by celebrity.

H₃.19.3: Student’s gender has significant effect on the evaluations of celebrity trustworthiness on purchase intention to a product promoted by celebrity.

H₃.19.4: Student’s gender has significant effect on the evaluations of celebrity likeability on purchase intention to a product promoted by celebrity.

H₃.19.5: Student’s gender has significant effect on the evaluations of celebrity match up on purchase intention to a product promoted by celebrity.

H₃.19.6: Student’s gender has significant effect on the evaluations of celebrity negative publicity on purchase intention to a product promoted by celebrity.
H₃.20: Student’s Age has significant effect on the evaluations of celebrity attributes on purchase intention to a product promoted by celebrity.

H₃.20.1: Student’s Age has significant effect on the evaluations of celebrity expertise on purchase intention to a product promoted by celebrity.

H₃.20.2: Student’s Age has significant effect on the evaluations of celebrity attractiveness on purchase intention to a product promoted by celebrity.

H₃.20.3: Student’s Age has significant effect on the evaluations of celebrity trustworthiness on purchase intention to a product promoted by celebrity.

H₃.20.4: Student’s Age has significant effect on the evaluations of celebrity likeability on purchase intention to a product promoted by celebrity.

H₃.20.5: Student’s Age has significant effect on the evaluations of celebrity match up on purchase intention to a product promoted by celebrity.

H₃.20.6: Student’s Age has significant effect on the evaluations of celebrity negative publicity on purchase intention to a product promoted by celebrity.

H₃.21: Student’s region has significant effect on the evaluations of celebrity attributes on purchase intention to a product promoted by celebrity.

H₃.21.1: Student’s region has significant effect on the evaluations of celebrity expertise on purchase intention to a product promoted by celebrity.

H₃.21.2: Student’s region has significant effect on the evaluations of celebrity attractiveness on purchase intention to a product promoted by celebrity.

H₃.21.3: Student’s region has significant effect on the evaluations of celebrity trustworthiness on purchase intention to a product promoted by celebrity.

H₃.21.4: Student’s region has significant effect on the evaluations of celebrity likeability on purchase intention to a product promoted by celebrity.

H₃.21.5: Student’s region has significant effect on the evaluations of celebrity match up on purchase intention to a product promoted by celebrity.
H₃.21.6: Student’s region has significant effect on the evaluations of celebrity negative publicity on purchase intention to a product promoted by celebrity.

H₃.22: Student’s type of degree has significant effect on the evaluations of celebrity attributes on purchase intention to a product promoted by celebrity.

H₃.22.1: Student’s type of degree has significant effect on the evaluations of celebrity expertise on purchase intention to a product promoted by celebrity.

H₃.22.2: Student’s type of degree has significant effect on the evaluations of celebrity attractiveness on purchase intention to a product promoted by celebrity.

H₃.22.3: Student’s type of degree has significant effect on the evaluations of celebrity trustworthiness on purchase intention to a product promoted by celebrity.

H₃.22.4: Student’s type of degree has significant effect on the evaluations of celebrity likeability on purchase intention to a product promoted by celebrity.

H₃.22.5: Student’s type of degree has significant effect on the evaluations of celebrity match up on purchase intention to a product promoted by celebrity.

H₃.22.6: Student’s type of degree has significant effect on the evaluations of celebrity negative publicity on purchase intention to a product promoted by celebrity.

H₄: All the extracted factors are reliable and belong to same construct.

H₅.1: There is significant correlation between celebrity endorsements on product’s favourable/positive word of mouth.

H₅.2: There is significant correlation between celebrity endorsements on product complaint & switching behaviour.

H₅.3: There is significant correlation between celebrity endorsements on brand loyalty.

H₅.4: There is significant effect of celebrity endorsement on product’s favourable word of mouth.

H₅.5: There is significant effect of celebrity endorsement on product complaint & switching behaviour.

H₅.6: There is significant effect of celebrity endorsement on brand loyalty.
H\textsubscript{5.7}: Celebrity endorsements influence among females is more positively related to: product switching and complaint behaviour; positive word-of-mouth behaviour; and brand loyalty, than among males.

H\textsubscript{5.7.1}: Celebrity endorsements influence among females is more positively related to positive word of mouth behaviour than among males.

H\textsubscript{5.7.2}: Celebrity endorsements influence among females is more positively related to product switching and complaint behaviour than among males.

H\textsubscript{5.7.3}: Celebrity endorsements influence among females is more positively related to product switching and complaint behaviour than among males.

H\textsubscript{6.1}: There is significant difference between the mean of high technical products’ endorsed by celebrity and buying behaviour.

H\textsubscript{6.2}: There is positive effect of celebrity expertise \& product/brand congruency on purchase intention of students for high technical products.

H\textsubscript{6.3}: There is significant difference between the mean of low technical products’ endorsed by celebrity and buying behaviour.

H\textsubscript{6.4}: There is positive effect of celebrity expertise \& product/brand congruency on purchase intention of students for low technical products.

H\textsubscript{7.1}: Celebrity expertise will influence students’ buying behaviour.

H\textsubscript{7.2}: Celebrity attractiveness will influence students’ buying behaviour.

H\textsubscript{7.3}: Celebrity trustworthiness will influence students’ buying behaviour.

H\textsubscript{7.4}: Celebrity likeability will influence students’ buying behaviour.

H\textsubscript{7.5}: Celebrity product match up will influence students’ buying behaviour.

H\textsubscript{7.6}: Celebrity negative publicity will influence students’ buying behaviour.
4.3. Research Approach

The aim behind conducting a research is to examine the existing theories, set up new theories or adding new knowledge to existing theories on the basis of latest findings (Saunders et al. 2009). Understanding of research approach is essential as it enables the researcher to focus and look at in-depth of the problem and make a decision on how to solve the problem, naming, and approaching the research topic (Saunders et al 2007). There are two kinds of research, namely deductive and inductive (Saunders, et al. 2009 and Hussey and Hussey 1997).

Deduction owes much towards scientific research. It involves developing a theory and hypotheses (or hypotheses) and designs a research strategy to test the hypotheses, which can be explained as relationships between cause and effect variables (Saunders et al. 2000). Deduction approach has several important characteristics. It aims to search and explain the causal relationship between variables. Another important characteristic is that concepts need to be operationalized in a way that enables facts to be measured quantitatively. It also dictates that the Researcher should be independent of what is being observed in order to pursue the principle of scientific rigour. The final characteristic of deduction approach is generalisation (Saunders et al. 2009).

On the other hand, inductive approach involves a theory being developed on the basis of analysis of collected data (Saunders, et al 2000). According to Bryman (2001) Inductive approach begins with observations and thereafter conclusions are made that are sufficiently capable of explaining the research problem. Further Saunders et al (2003) states that inductive approach is concerned with the context in which events take place and theory are built subsequently under the light of research findings. An inductive approach seems to be less appropriate for this research because inductive approach is more concerned with the cause for the situation rather than the result (Deploy and Gitlin 2004).

“The logic of this study is deductive as the purpose of this study is to test the hypotheses, and draw conclusion on the basis of statistical analysis of the data with the ability to be generalised (Lee and Lings 2008). Moreover the application of deductive approach will help the researcher to explain the relationship between celebrity endorsement and student buying behaviour.”
4.3.1. Quantitative Versus Qualitative Research

Qualitative and quantitative are the two main approaches to conduct a research.

The former involves collecting data that is mainly in the form of words, and the latter involves data which is either in the form or can be expressed in numbers (Easterby-Smith et al. 2009). However this simplified distinction may lead to confusion because both of these methods may be used by both Positivist and Interpretivist epistemologies and can be supported by both nominalist and realist ontologies (Easterby-Smith et al. 2009). In fact, many researchers have supported the idea of using multi-method approach in marketing research strategy as the combination of these two methods may lead to some interesting and exciting conclusions in a research study (Flick 2002 and Carson et al. 2001).

Denzin and Lincoln (2005) referred Quantitative research as the — science that silences too many voices. The quantitative approach involves collecting numerical data and analysing it in a statistical manner by applying statistical tests (Hussey and Hussey, 1997). It follows rigorous methods and procedures which allow generalisation of the findings, to measure and analyse causal relationships between variables (Denzin and Lincoln 2000). Quantitative approach is a method concerned with logically and critically testing, verifying and identifying variables, in addition, it is objective and focuses on testing hypothesis and is very result oriented (Ghauri and Gounhaug, 2003). Quantitative research is conducted and validated by social survey and by experimental investigations to find out the fact and cause of social phenomena (Robson 1994).

Qualitative approach aims to discover the views, perception and opinions of groups or individuals through language and the main method to conduct this is in-depth interview (Easterby-Smith et al. 2009). According to Robson (1993) qualitative data tends to be based on meanings communicated verbally, concerns with understanding behaviour from actor's out of his own experience. Walliman (2001) further stated that qualitative research is more related with participant observation and unstructured in-depth interview in order to find out the feelings and motivation behind actions and attitudes. Qualitative research emphasises on subjective interpretation (Bryman, 2001) and facilitates effective and in-depth understanding of the research topic (Easterby-Smith et al. 2009). The qualitative research method provides a deeper understanding, knowledge and insight into a particular phenomenon, by providing answers to questions of “how?” rather than “what?” (Miles and Huberman, 1994).
“From the above discussion and considering research questions, the Researcher decides to adapt the quantitative research. Quantitative approach would help the Researcher to collect large amount of data to answer the research questions and further leading to generalisation. Further the use of quantitative method is justified if the area of research topic is large and when there is a need to deduce casual relations between variables (Gordon and Langmaid 1988).”

4.4. Research Design

It is important to link research aims and objectives with the research philosophy and research design as it may help the researcher to find out answers to the research questions. Therefore, identification of research purpose is based on the success and direction of the research design (Saunders et al. 2009).

According to Robson (2002) Research design is a process that turns the research question into a research project (cited in Saunders et al. 2009). Ghauri and Gronhaug (2002) further defined research design as an overall plan for relating the conceptual research problem to relevant and practicable empirical research'. Saunders et al. (2006) simplified the concept by stating that “Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. Therefore, for this dissertation the Researcher has justified the research design on the basis of research questions and objectives as well as by being consistent to the research philosophy as suggested by Saunders et al. (2009).

According to Saunders et al. (2009) and Jankowicz (2005) research methods can be classified under three types of research purposes: exploratory, descriptive and explanatory. According to Robson (2002), an exploratory study is a valuable means of finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (Cited in Saunders et al. 2009, pp 139). It is particularly used if the researcher is uncertain and wishes to clarify the understanding about the nature of the problem. Secondly, the objective of descriptive research is “to portray an accurate profile of persons, events or situations” (Robson 2002, Cited in Saunders et al. 2009, pp 140). According to Gumnessson (1991) it is the simplest form of science as it just involves observing and reporting other people’s findings. Finally, the studies that establish causal relationship between variables can be termed as explanatory research. It emphasises on studying a situation or a problem in order to explain the relationship between variables (Saunders et al. 2009).
“This study aims the effect of celebrity endorsements on students buying behaviour; therefore, the Researcher has decided to begin with exploratory research design as its immediate purpose is to develop hypothesis and questions for further research (Cooper & Schindler, 2007, pp 139 – 140). For making the study conclusive after exploratory research, Descriptive research design is used. It uses set of scientific methods and procedures to collect raw data and create data structure that describe the existing characteristics like attitude, intention, preference, purchase behaviour etc (Hair, Bush & Ortinau, 2000, pp 38). Under Descriptive research, Cross sectional research design is used, means information from the sample of population element is collected only once (Malhotra & Dash, 2007, pp 84).”

4.5 Research Strategy

Research strategy enables the researcher to answer the particular research questions and meet their objectives (Saunders et al. 2009). The choice of research strategy is guided by the research questions and objectives, the extent of existing knowledge, the amount of time and other resources available as well as researchers own philosophical underpinnings (Saunders et al. 2009). Saunders et al. (2009) further revealed various type of research strategy approaches used in a management research i.e. experiment, survey, case study, action research, grounded theory, ethnography and archival research. According to Yin (2003) each of these strategies can be implemented for exploratory, descriptive and explanatory research. Further Robson (1993) stated that more than one method can be used by the researcher depending on the nature and number of research purpose(s).

Survey strategy is a popular and commonly used strategy in business and management research. It is usually associated with the deductive approach and it is most commonly used to answer who, what, where, how much and how many questions (Saunders et al. 2009). Accordingly, it is tend to be used for descriptive and exploratory research. Moreover, survey allows a researcher to collect a large amount of data from a sizeable population in a highly economical way (Saunders et al. 2009). Most importantly the data collected by using a questionnaire is standardised and allows easy comparison. Additionally this strategy is generally perceived as authoritative among people and is comparatively easy to explain and understand (Saunders et al. 2009).

“Therefore, for this research project the Researcher aims to collect the data through a structured questionnaire in the form of a survey.”
4. 6.  Data Collection

It is important for a researcher to collect all the necessary information and relevant data in order to be successful in achieving the desired aims and objectives of the research. According to Saunders et al., (2009) basically there are two data collection methods i.e. primary and secondary source of data. According to Collins and Hussey (2003) “Primary data” is known as original data that is collected from the main source. Sources to collect primary data include observation, survey, questionnaire and personal interviews (Hussey and Hussey 1997). On the other hand, Secondary data involves collecting and analysing data which is already been collected by past researchers for some other purposes. It can be in the either form, raw data and published summaries (Saunders et al., 2003).

“For this research the Researcher has used structured questionnaire method as a source to obtain primary data. And for the secondary data the Researcher has gained data from the relevant text books, journals, reports, articles and the internet.”

4. 6. 1. Secondary Data

Secondary data includes textbooks, surveys, reports, newspapers, magazines, articles, video recordings etc. (Saunders et al. 2007). The extent of secondary data available provides the base for a strong literature review and secondary research analysis. The availability of the secondary data enhances the existing knowledge of the researcher and offers guidance for primary data collection (Creswell 2009). The appreciating and commendable work by many researchers on celebrity endorsements has helped me to analyse and build on the secondary data available and also work on the further research that adds value to my research topic.

The collection and analysis of secondary data is time saving, cost efficient and provides a wider variety of options and findings (Ghauri and Gronhaug, 2003; Saunders, et al, 2007). However, its disadvantages cannot be neglected. The data is collected to serve different purposes to different studies. It means that the aims and objectives of the previous study might not match with the existing aims and objectives (Ghauri and Gronhaug, 2005). Additionally the secondary data might not be accurate and updated as the data has been collected a few years ago that might not solve the purpose of existing research question (Saunders et al. 2000).
“The Researcher has collected secondary data in the form of previous research work, papers and articles are collected from the library of MIM – Visnagar, Indian Institute of Management (IIM) – Ahmedabad, Ahmedabad Management association (AMA) – Ahmedabad. E – Journals packages like Emerald Management Extra, Proquest, and EBSCO have been used for collecting the information about previous research.”

4. 6. 2. Primary Data
According to Saunders et al. (2007) Primary data involves the method which is _collected specifically for the research project being undertaken_. Jankowicz, (2005) further states that data collected through primary sources is more relevant and consistent with the set objectives to the study. Ghauri and Gronhaug (2002) asserts that only primary data ca

“The analysis of primary data is a central source for this study. Thus the Researcher has adopted survey strategy using Self-administered questionnaire technique in order to collect primary data for this study.”

The survey strategy allows the researcher to collect which can be analysed quantitatively using descriptive and inferential statistics. The data collected through survey strategy is easy to explain and understand (Saunders et al. 2009). Moreover, it can be used to suggest possible reasons for relationships between variables and to produce models of these relationships (Saunders et al. 2009).

4. 7. Research Instrument
Within business and management research, the questionnaire is one of the most commonly used data collection technique within the survey strategy (Saunders et al. 2009). According to deVaus (2002) (cited in Saunders et al. 2009 pp. 360) generally questionnaire includes all the data collection techniques in which —each respondent is asked to respond to the same set of questions in a predetermined order. Using questionnaire is an efficient way of collecting responses from a large number of people because every respondent is asked to respond to the same set of questions. Moreover it can avoid bias in data collection process (Saunders et al. 2009).

“As a result, for the current study, questionnaire tends to be the most reasonable and appropriate method in collecting data from large number of people in order to fulfil the aims and objectives of the research study.”
4.8. **Questionnaire Design**

In order to collect data, the Researcher distributed Self-administered questionnaires to be completed by the respondents. This type of questionnaires are electronically administered through the internet or Intranet, posted or delivered by hand to respondents (Saunders et al. 2009). Conducting such questionnaires is easy, relatively cheaper than face to face surveys and allows an opportunity for a large number of people to be surveyed (Saunders et al. 2009).

“The questionnaire is designed in a way to empirically test the hypotheses developed, effect of celebrity endorsement on students’ buying behaviour.”

The questionnaire for the research is divided in two sections.

“Section one comprises questions to explore and examine the current state of consumer perception about celebrity endorsements. Section also deals with evaluating the effect of each celebrity attribute on the purchase intention of consumers. Section two is aimed at evaluating the effect of celebrity endorsements on high and low endorsement products and also deals with collecting the demographic data of the respondents for instance their age, gender etc.”

“The Researcher used 5 point Likert scale and 7 point Semantic Differential scale for evaluating the degree of agreement for each question. Likert scale questions are relatively easy to complete (Robson 1993).”

The Researcher promised to keep the confidentiality of demographic profile of the respondents. In order to get the high response rate the Researcher contacted the students directly in their respective colleges and areas. The copy of online questionnaire is attached in (Appendix 1).

4.9. **Pilot Test**

The purpose of the pilot test is to refine the questionnaire so that respondents don't face any problems answering the questions and to eliminate further problems in recoding the data. Additionally it helps the Researcher to check the reliability and validity of the data to be collected (Saunders et al. 2009). Pilot test ensures that the collected data will be helpful in answering the investigative question or research questions.
The number of people required to pilot test the questionnaire depends on research questions, research objectives and size of research project. According to Fink (2003b) for most student questionnaire the number for a pilot test is 10 (cited in Saunders et al. 2009).

“Therefore the Researcher conducted the pilot test by distributing the questionnaire to 50 students in Gujarat University. After completing the pilot test unclear and confusing questions were revised and rectified accordingly. Small definitions were provided for the jargons used in the questionnaire.”

4. 10. Sampling

Determining an appropriate research population and proper sampling procedure is an important aspect for a researcher in order to answer research questions. According to Jankowicz (2000) Sampling is a calculated choice of number of the people, representing a given population. Since, it is impossible for the Researcher to survey the whole population due to time, money and access constraints it becomes important for the Researcher to determine sampling size and sampling frame, in order to gather findings from the representative set of population.

According to Churchill (1995) sampling procedure can be divided into two parts namely probability and non-probability sampling. Saunders et al (2009) defined probability sampling as chance of each case being selected from the population is known and equal. Whereas, non-probability sampling is a case where sample has not been selected using the random selection method. It implies that some units are more likely to be selected than others in a given population (Bryman and Bell, 2003).

“The Researcher will use non-probability sampling for this research. The main argument for this is limited time and resources. Secondly, non-probability sampling is associated with recognising and questioning the respondents on the basis of their background and past experience (Jankowicz 2005).”
4. 11. Sampling Technique
The sampling technique used for this study is convenience sampling. Under convenience sampling respondents are selected on the basis of proximity, ease of access and willingness to participate (Timothy 2005). It enables the researcher to gather information from the targeted group of people easy and quickly.

“The Researcher has selected convenience sampling for this research mainly on the basis of easy access to target population in Gujarat (India).”

4. 12. Sampling Size
The issue of sample size for all non-probability sampling techniques (except quota sampling) is ambiguous and, there are no rules (Saunders et al. 2009), generalisations being made to theory rather than about a population (Saunders et al. 2009 pp. 233). According to Patton (2002) Sample size depends on the research questions and objectives of the research and also the analytical skills of the Researcher (cited in Saunders et al. 2009 pp. 235). Generally researchers don’t restrict themselves to any specific sample size. Fortunately, Crimp and Wright (1995) offered some guidance by proposing that sample size anything larger than 30 and below 500 is appropriate for the research methods. The minimum sample size required for the study was 384 numbers (95% confidence level and 5% error) (Malhotra, 2010).

Sample Size = \( \frac{Z^2*P*Q}{e^2} \)

\[ \frac{(1.96)^2 * 0.5 * 0.5}{(0.04)^2} = 600.25 \]

For this research the Researcher aims for a 1000 Samples.

4. 13. Sample Unit & Area
For the present study, students of Gujarat state are selected. The students are taken from Ahmedabad, Baroda, Rajkot, Surat & Mehsana region of Gujarat.

There are a number of data quality issues need to be considered while conducting a research. According to Saunders et al. (2009) the quality of research findings can be identified on the basis of reliability and validity. Emphasising on research design: reliability and validity reduces the possibility of getting the findings wrong (Saunders et al. 2009).
4. 14. 1. Reliability

“Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders et al. 2009 pp. 156).” Further, Cooper and Schindler (2003) stated that reliability involves supplying consistent findings. Reliability of the research refers to the ability of the research to generate same findings to the same questions if the research is repeated or conducted again (Hussey and Hussey 1997). According to Easter by-Smith et al (2008) Reliability of the research can be tested by posing the following three questions (Cited in Saunders et al. 2009):

- Do the measures produce the same findings on other occasions?
- Did other Researchers reached the same findings?
- Is there a transparency in the sense raw data was analysed?

“Since this research is based on celebrity endorsements in Gujarat context. In order to ensure the reliability of the research, the Researcher has collected the data from Gujarat students extensively exposed to billion dollar celebrity endorsements business in India. Moreover, the Researcher has conducted a pilot test to reduce the confusions in the questionnaire and make it more meaningful for the respondents. The Researcher has also calculated reliability statistics on each question in the analysis”.

A reliability analysis was conducted for all scale measures. The result is listed in below table:

<table>
<thead>
<tr>
<th>Table 4: Reliability statistics – Cronbach’s Alpha</th>
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<tbody>
<tr>
<td>Perception regarding Celebrity Endorsements</td>
</tr>
<tr>
<td>Celebrity Attractiveness</td>
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<tr>
<td>Celebrity Trustworthiness</td>
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<tr>
<td>Celebrity Expertise</td>
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<tr>
<td>Celebrity Meaningfulness</td>
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<tr>
<td>Celebrity Likeability</td>
</tr>
<tr>
<td>Purchase Intention</td>
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<tr>
<td>Behavioural Intention</td>
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<tr>
<td>High Involvement</td>
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<tr>
<td>Low Involvement</td>
</tr>
</tbody>
</table>
4. 14. 2. Validity

According to Hussey and Hussey (1997) Validity is concerned with “the extent to which the research findings accurately represent what is really happening in the situation”. Reliability is concerned with the fact whether the findings are really about what they seem to be about (Saunders et al. 2009). Silverman (2000) made is more simple to define by stating that Validity is a synonym for truth. Furthermore Janskowicz (2000) revealed that validity deals with the accuracy of the measurements used for data collection and analysis, the data is valid if other researcher can reach to the same conclusion using other methods.

“The Researcher has maintained the validity of the research by conducting a pilot test before conducting the main research in order to avoid any confusion and amendments were made thereafter. Moreover, the Researcher has tried to explain each and every step during the research before arriving to the conclusion.”

4. 15. Data Analysis

The data collected through the questionnaire was analysed using the SPSS 20.0 & AMOS 16.0 software. Researcher has used Descriptive Frequency analysis, exploratory factor analysis & Confirmatory factor analysis, Correlation analysis, ANOVA, Regression tests and SEM in order to examine the relationship between constructs and test the hypotheses accordingly.

4. 15. 1. Frequency Descriptive Analysis

Descriptive frequency statistics is used to present quantitative data in a manageable form. It helps to represent large number of data in a simple and sensible way. It is basically used to assess the trend of demographic data (Mean, median, mode, standard deviation and percentage). Descriptive statistics include the numbers, tables, chart and graphs to describe, organise and summarise the data. Descriptive statistics help to summarise and support assertion of facts.

4. 15. 2. Exploratory Factor Analysis and Confirmatory Factor Analysis

Exploratory factor analysis (EFA) is a method that is used to help investigators represent a large number of relationships among interval-level variables in a simpler (more parsimonious) way. This approach allow the computer to determine which, of a fairly large set of items, "hang together" as a group, or are answered most similarly by the participants. A
related approach is **confirmatory factor analysis**, in which one test very specific models of how variables are related to underlying constructs (conceptual variables).

### 4. 15. 3. Analysis of Variance (ANOVA)

A method of analysis used when dealing with a continuous or integral dependent variable and one or more categorical or nominal variables.

### 4. 15. 4. Correlation Analysis

Correlation is one of the most important statistical analysis tool. It helps to describe the degree of relationship between two variables. Correlation determines the extent to which changes in the value of an attribute are associated with changes in another attribute. The Researcher will use correlation analysis technique to measure the relationship between different attributes of celebrities and purchase intention and testing the hypotheses.

### 4. 15. 5. ANCOVA

Analysis of covariance (ANCOVA) allows to compare one variable in 2 or more groups taking into account (or to correct for) variability of other variables, called covariates. ANCOVA – an extension of ANOVA that provides a way of statistically controlling the (linear) effect of variables one does not want to examine in a study. These extraneous variables are called covariates, or control variables.

### 4. 15. 6. Regression Analysis

Regression analysis is used for modelling and analysing several variables. It is used to examine the relationship between a dependent variable and one or more independent variables. In this research dependent variable is purchase intention and independent variables are the various attributes of celebrity endorsers. Correlation analysis will help the Researcher to examine and understand how the value of dependent variable changes when any one of the independent variable changes, while other variables are constant. For this research the Researcher will use simple linear regression analysis.

### 4. 15. 7. SEM (Structural Equation Modelling)

IBM SPSS Amos implements the general approach to data analysis known as structural equation modelling (SEM), also known as analysis of covariance structures, or causal modelling. In SEM, Path analysis was used to analyse data. Path analysis which is hypothesizes causal relationships among variables and tests the causal models with a linear equation system.
4. 16. Limitations of the Study

Every research has certain limitations therefore it is necessary to acknowledge them before moving on to generalisations of findings. There are certain problems being faced by the Researcher while conducting this research. The following are the few constraints faced by the Researcher while conducting this study.

- One of the main issues associated with the research is gaining access to the data. Internet has undoubtedly made it even easier to access and collect the secondary data through e-journals, articles and other e-resources. However, gaining physical access or entry (Gummesson 2000) in order to collect primary data can still be difficult. Respondents may not be prepared to contribute to the research due to lack of time and resources required. However the Researcher has made pre-survey contact with the respondents in order to remove operational constraints.

- Ethical challenge is one of the major concerns while conducting a research. Cooper and Schindler (2008 pp 34) defined ethics as the “norms or standards of behaviour that guide moral choices about our behaviour and our relationships with others”. For this research the Researcher has ensured that the research design is both methodologically sound and morally defensible to respondents involved. The anonymity and confidentiality in terms of the answers is ensured at all times and the purpose of the research was made clear to the respondents beforehand.

- Another big limitation to the research is the time; the Researcher has to submit the research project before the specified deadline. While studying celebrity endorsements the Researcher has come across many other interesting and challenging concepts. Due to scarcity of time the Researcher has only focussed on the relevant literature contributing to the research topic. The Researcher considered and examined the factors/attributes from the earlier literature on celebrity endorsements. However additional research approaches qualitative study (focus groups) could have benefited this research even more. In other words it may lead to the determination of other relevant factors that might affect the purchase intention of the consumers. Nevertheless, the Researcher has successfully reviewed and mentioned all the relevant information available up to date. Furthermore, other related and interesting concepts are suggested for future research. Future research can be conducted on a broader scale on the basis of sex, disposable income and product categories.
• The sample size is relatively small to represent the larger population of India. Hence the results of this study are not sufficient enough to make concrete recommendations. Another limitation to the research is that majority of the respondents were young consumers under the age of 18-30. The Researcher didn’t get any samples from the people above the age of 60 (senior citizens) who may have a different opinion regarding celebrity endorsements.

• Moreover, large number respondents belonged to or represented urban part of the population. Hence the rural sector, the major part of Indian population was left unobserved. Therefore the results may show difference if the study is conducted on a larger scale. Therefore the results from this research may not be used to sample India as a whole country.

• Even though the quantitative method to the approach has provided the most appropriate results for achieving the research objectives, it may also affect the outcomes of the research. The Researcher used questionnaire method in order to collect the data from the respondents. This method is not considered to very reliable because there is no in depth interview finding the hidden motive of the respondent and therefore the respondents may manipulate with the data in terms of age, gender etc.

On this account, the generalisations made on outcomes of the research are reasonable. Moreover, the elimination of above said limitations might reveal new insights in the area of celebrity endorsements.
4. 17. Methodological Framework

Figure 4: Methodological Framework

- Research Purpose: Descriptive, Quantitative
- Research Approach: Survey
- Research Method: Convenience
- Sampling Technique: Convenience
- Data Analysis: SPSS & AMOS

Validity and Reliability
Ethical Issues
Limitations