CHAPTER 3

RESEARCH METHODOLOGY

Research, according to Redman and Mory, is a "systematic endeavor to acquire new knowledge" that makes an original contribution to the existing body of knowledge and promotes its advancement. Research involves the quest for truth through study, observation, comparison, and experimentation. It is fundamentally the search for knowledge using objective and systematic approaches to address problems. Once the research problem is defined, selecting the research design becomes essential for obtaining meaningful results. Research design involves decisions on what to study, where, when, how extensively, and by what methods the study will be conducted. This chapter focuses on the methodology employed in this research study.

The current study on brand equity in higher education highlights the importance of measuring, managing, and building the brand equity of higher education institutions in the State of Gujarat. This focus is essential for their survival, sustainability, and growth. The study of brand equity is done extensively for physical products but when it comes to service industry and within that higher education services, the studies conducted are scarce. Given the difficulties associated with evaluating quality prior to consumption, a strong brand which signals high quality can decrease the perceived risk associated with choice (Davies and Ellison, 1997; Va´zquez et al., 2002; Biel, 1992).

Research in higher education becomes interesting and important as HEIs across the world have become marketing oriented and students have become consumers. (Chen, 2008; Mazzarol and Soutar, 2008). HEIs across the world are proliferating and the competition is getting intense to gain competitive edge and attract more students. Moreover, the survival and sustainability of Grant-in-aid universities/colleges as against the private universities/colleges is ever challenging. The survival of the fittest and the brand that understands the consumer needs in relation to higher education institutions will be the order of the day. So, it is necessary for HEIs to strive to build their own brands and increase their brand equity.

The researcher has tried to outline in brief, various conceptual aspects, methodological and procedural steps, and various statistical tools concerning the research methodology falling under the major domains of brand equity of higher education institutes.

3.1 KEY TERMS OF RESEARCH STUDY

Following are the key terms of the research study.

3.1.1 Brand

According to (Schuiling and Moss, 2004b), a brand is a name that will register the product in the consumer's mind as a set of tangibles, that is rational, and intangible, that is irrational, benefits.

3.1.2 Branding

Branding is the process of creating and shaping the perception of an organization, company, product, or service in consumers' minds. It is a strategic approach that helps people quickly identify and engage with a brand, providing a clear reason to choose its offerings over competitors' by defining what the brand represents and what it does not.

Branding is the process of giving products and services the distinctive attributes and power of a brand. (Kotler & Keller, 2015)

3.1.3 Branding of Services

Branding in services encompasses the strategic process of crafting and communicating a

distinctive identity, value proposition, and experience for intangible offerings, such as consultancy, hospitality, education etc.

3.1.4 Brand Equity

Keller (1993, p. 2) defined customer-based brand equity (CBBE) as the effect of brand knowledge on consumers' reactions to a brand's marketing efforts.

In 2013, Keller further described brand equity as the value that consumers assign to a brand. This value arises from what customers have learned, felt, heard, and how they have responded to the brand over time.

3.1.5 Consumer Based Brand Equity

According to Keller (1993), consumer-based brand equity is the influence that brand knowledge exerts on consumer reactions to a brand's marketing efforts. It develops when consumers have favorable, strong, and unique associations with the brand in their memory.

In other words, it represents the degree to which a customer likes the brand and how this positive perception affects their purchasing behavior.

3.1.6 Brand Awareness

Brand awareness is related to how strong the brand is in the customer's memory which is reflected in the customer's ability to remember or perceive a brand under various conditions (Keller, 2009).

According to Aaker (1991, p. 61), brand awareness is "the ability of buyers to recognize or recall that a brand is a member of a particular product category."

3.1.7 Brand Image

Brand image is the current view of the customers about a brand. It can be defined as a unique

bundle of associations within the minds of target customers. It signifies what the brand presently stands for. It is a set of beliefs held about a specific brand.

3.1.8 Brand Heritage

Urde, Greyser, and Balmer define the brand heritage construct as a crucial component of a corporate brand's identity. It is marked by a brand's history, longevity, core values, symbolic elements, and an organizational commitment to the significance of its past (2007, pp. 4-5).

3.1.9 Perceived Quality

Perceived quality is a consumer assessment related to the company's ability to create superior product value (Parasuraman, 1998). Some researchers see perceived quality as personal and subjective; consumers assess whether a product is worth buying and become a consumer experience in using a product (Chen, 2001; Kakkos et al., 2015; Olsen, 2002).

3.1.10 Customer experience

Customer experience (CX) is the overall perception a customer has of a brand based on interactions across all touchpoints throughout their journey. It includes every aspect of engagement, from initial awareness and purchase to post-purchase interactions. A positive CX involves consistent, personalized, and seamless interactions that exceed customer expectations, leading to satisfaction, loyalty, and advocacy. To enhance CX, businesses focus on understanding customer needs, leveraging technology, and building meaningful connections to foster long-term relationships.

3.1.11 Brand recognition

Brand recognition is a consumer's ability to identify a brand through its distinctive features, like its logo, packaging, slogan, or jingle, without needing to hear the brand name. This familiarity with the brand's visual and auditory elements helps consumers distinguish it from competitors. High brand recognition can lead to greater consumer trust and preference, as well as a more robust market presence.

3.1.12 Brand History

Brand history refers to the timeline and evolution of a brand from its inception to the present. It encompasses the key milestones, developments, and transformations the brand has undergone, including its founding story, major achievements, and changes in strategy or

positioning. Understanding a brand's history provides insight into its heritage, values, and the experiences that have shaped its current identity.

3.2: RESEARCH GAP:

Despite the significance of brand equity in the education sector, there is a significant gap in research regarding the subject specifically focused on Grant-in-aid institutions in Gujarat. Existing literature predominantly focuses on brand equity in private educational institutions, while Grant-in-aid institutions, which have an essential role in the education system, have received limited attention. Research on consumer-based brand equity in the context of Grant-in-aid higher education institutes is notably scarce, creating a significant gap in the literature. These institutes often operate under unique financial and administrative constraints compared to their private counterparts, making the application of traditional CBBE models more challenging. The current study addresses this gap by specifically examining how brand equity principles and models can be applied to Grant-in-aid institutions, considering their specific challenges and opportunities.

Also, scarce empirical studies exist that explore the factors influencing brand equity and its impact on these institutions. Thus, there is a research gap that necessitates a comprehensive investigation into the brand equity of Grant-in-aid institutions in Gujarat to enhance our understanding of its determinants and consequences within this specific context.

Moreover NIRF (National Institutional Ranking Framework), SIRF (State Institutional Ranking Framework), and NAAC (National Assessment and Accreditation Council) rankings have emerged as significant factors for Grant-in-aid institutions to maintain brand equity. These rankings provide external validation of the quality and performance of educational institutions, thereby influencing public perception and attracting students, faculty, and funding. Very few higher education institutes form the state of Gujarat fare in the list of top 50 universities across the country. And, Grant-in-aid universities are very few among them.

3.3: RATIONALE OF THE RESEARCH STUDY

The rationale for conducting an empirical investigation on measuring, managing, and building consumer-based brand equity of selected higher education institutes in Gujarat state lies in the importance of building and managing a strong brand in the highly competitive education sector. This research considers selected Grant in aid institutions which are in existence for a considerable time, caters to large number of students from different disciplines, have heritage aspect attached to it and more importantly is currently encountering fierce competition from private institutions. So, measuring, managing and building consumer-based brand equity is equally important for grant in aid institutions to sustain, compete and grow.

Positive brand equity in education sector is essential for not only drawing in potential students, but it is also essential for maintaining the loyalty of current students and alumni. A strong brand in the education sector can lead to higher enrolment, improved student satisfaction, improve financial performance, better negotiating power, develop credibility and a positive reputation in the industry.

Regardless of the significance of brand building in the education sector because of cropping of new private higher educational institutions, there is scarce empirical research as per review of literature that explores the strategies and practices that higher education institutes in Gujarat state are using to measure, manage, and build customer-based brand equity. Therefore, a need exists to conduct an empirical investigation to gain insights into the current branding practices of selected higher education institutes in Gujarat state.

This study will enhance the literature by providing empirical insights into the usefulness of various branding strategies and practices used by higher education institutes in Gujarat state. Besides, this study will provide insights into the challenges faced by higher education institutes in building and managing their brands. The outcomes of this research will be useful for higher education institutes in Gujarat state and other regions seeking to improve their branding strategies and practices. Further, the demand for quality education following on the overall growth and development of students, developing and polishing their skill sets, and interdisciplinary and multi- disciplinary approach towards knowledge has altogether pressurised the HEIs to continuously improve their width and depth of services provided.

3.4: STATEMENT OF PROBLEM:

Despite the growing significance of brand equity in the higher education sector, there is a shortage of empirical studies focused on measuring, managing, and building consumer-based brand equity from consumers perspective for higher education institutions in Gujarat State, India. Therefore, an empirical investigation is needed to identify the key factors contributing to consumer-based brand equity in these institutions and to devise impactful approaches for managing and enhancing brand equity in this context. The statement of the problem is as follows:

"An Empirical Investigation on Measuring, Managing and Building Consumer-Based Brand Equity of Selected Higher Education Institutes in Gujarat State, India"

3.5: RESEARCH OBJECTIVES

Studying the brand equity of higher education institutes is of paramount importance due to its multifaceted impact. Different stakeholders evaluate brand equity from their own perspective and the most important stakeholder are students. A robust brand elevates the perceived value of education, allowing institutes to command higher tuition fees and draw in top-tier students. Furthermore, positive brand equity cultivates deep alumni engagement, fostering increased support and contributions. It also aids in recruiting and retaining talented faculty and staff, bolstering institutional strength.

Competition, funding, international collaborations, enhancing global recognition are other factors leading to measuring, managing, and building brand equity. Further, the over changing UGC/AICTE and other apex bodies standard of teaching, examination and research in universities and colleges have pushed HEIs to surpass their own standards/ bench marks.

Research objectives have emerged from defining research problem statements, identifying research gaps, and conducting an extensive study of the domain and literature review.

In this reference, the primary goal is to identify brand equity dimensions of HEIs and to determine relative importance of CBBE dimensions in creating a strong university brand.

Along with the main objective the subsidiary objective of the research are as follows:

Study 1: Consumer-Based Brand Equity Dimensions in Higher Education Institutes

1) To identify various dimensions of Consumer-Based Brand Equity in Higher Education Institutes based on literature review.

2) To test the proposed conceptual model of Consumer-Based Brand Equity in Higher Education Institutes

3) To investigate inter-relationships/causal relationships among the Consumer-Based Brand Equity dimensions in the Higher Education Institutes.

4) To determine the relative importance of Consumer-Based Brand Equity dimensions in creating a strong university brand.

5) To investigate the impact of Consumer-Based Brand Equity dimensions on the perceived overall brand equity of Higher Education Institutes.

Consumer Attributes and Brand Equity in Higher Education Institutes

6) To determine the impact of selected consumer attributes on the brand equity of

Higher Education Institutes.

Study 2: Brand Heritage and Consumer-Based Brand Equity in Higher Education Institutes

1) To explore the perception of respondents as to whether and to what extent heritage is present or potentially found in Higher Education Institutes as a Brand

2) To determine the impact of brand heritage on the consumers' perceived value of the Higher Education Institutes

3.6 RESEARCH HYPOTHESIS:

To accomplish the aforementioned objectives, a series of hypotheses have been formulated and tested. Conclusions were drawn based on the test results. The Null hypotheses are mentioned below:

Study 1: CONSUMER-BASED BRAND EQUITY DIMENSIONS IN HIGHER EDUCATION INSTITUTES

- **(Brand Awareness: Promotional activities and Word-of-Mouth)**

  HO1a: Promotional activities do not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

  HO1b: Word-of-Mouth does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

- **(Brand Image: Service attributes, Symbolic attributes, and Provider attributes)**

  Service Attributes – Price, Perceived Quality, and After-Sales-Service

  HO2a: Price does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

  HO2b: Perceived Quality do not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

  HO2c: After-Sales-Services do not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

  Symbolic Attributes – Brand Personality, Social Image, and Brand Positioning

  HO3a: Brand Personality does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

  HO3b: Social Image of the brand does not have any significant impact on Consumer Based Brand Equity of Higher Education Institutes.

  HO3c: Brand Positioning does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

Provider Attributes – Quality of Teaching Staff, Quality of relationship of Teaching Staff with customers, Quality of relationship of Non-teaching staff with customers, Location, Size, and University reputation

HO4a: Quality of Teaching staff does not have any significant impact on Consumer Based Brand Equity of Higher Education Institutes.

HO4b: Quality of relationship of Teaching staff with customers does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

HO4c: Quality of relationship of Non-teaching staff with customers does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

HO4d: Location does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

HO4e: Size does not have any significant impact on Consumer-Based Brand Equity of Higher Education Institutes.

HO4f: University reputation does not have any significant impact on Consumer Based Brand Equity of Higher Education Institutes

- **Consumer Attributes and Brand Equity in Higher Education Institutes**

HO5a: Consumers" age does not have any significant impact on brand equity of Higher Education Institutes.

HO5b: Consumers" gender does not have any significant impact on brand equity of Higher Education Institutes.

HO5c: Consumers" education does not have any significant impact on brand equity of Higher Education Institutes.

HO5d: Consumers" income does not have any significant impact on brand equity of Higher Education Institutes.

Study 2: BRAND HERITAGE AND CONSUMERS' PERCEIVED VALUE DIMENSIONS

Ho6a: There is no significant association between Brand heritage and perceived economic value of Higher Educational Institutes.

Ho6b: There is no significant association between Brand heritage and perceived functional value of Higher Educational Institutes.

Ho6c: There is no significant association between Brand heritage and perceived affective value of Higher Educational Institutes.

Ho6d: There is no significant association between Brand heritage and perceived social value of Higher Educational Institutes.

3.7 SIGNIFICANCE OF THE RESEARCH STUDY

This research on measuring, managing, and building consumer-based brand equity (CBBE) significantly contributes to the existing literature by filling gaps in the current understanding of brand equity in higher education. By focusing on higher education, this study expands the theoretical framework of CBBE, adapting it to suit the unique characteristics of educational services. The research provides a comprehensive analysis of how brand equity can be developed and leveraged within higher education, offering new models and metrics that other researchers can utilize. By extending the CBBE literature into this new domain, the study paves the way for future research that can further refine and expand upon its findings, ultimately enriching the academic discourse surrounding brand equity.

Considering specific opportunities and challenges of Grant-in-aid higher education institutes this research not only adds a new dimension to the study of CBBE but also emphasizes the need for more focused research on different types of educational institutions, ensuring that branding strategies are relevant and effective across diverse contexts.

The findings of this study are likely to offer profound insights to higher education authorities, aiding in decision-making across several critical parameters. By understanding the elements

that contribute to strong brand equity, administrators can make informed choices regarding marketing strategies, student recruitment, and alumni engagement. The research highlights key factors such as brand awareness, brand image, brand heritage, and perceived quality, all four of which can significantly impact an institution's reputation and appeal. With these insights, authorities and marketers of educational services can develop targeted initiatives to enhance their institution's brand, attract more students, and build lasting relationships with other stakeholders. Furthermore, the study provides a framework for evaluating the effectiveness of branding efforts, enabling continuous improvement and adaptation to changing market conditions giving rise to new and unique challenges. This strategic approach to branding empowers higher education leaders to not only strengthen their institutions' competitive position but also to ensure long-term sustainability and success in an increasingly competitive educational landscape.

3.8 SCOPE AND COVERAGE OF THE RESEARCH STUDY:

This research examines three key dimensions of brand equity in higher education institutions: brand awareness, brand image, and brand heritage. Brand awareness measures how well students recognize and recall an institution's name and traits. Brand image captures perceptions about the institution's reputation, quality, and uniqueness. Brand heritage reflects the historical and cultural legacy, including traditions and achievements. Together, these dimensions offer a comprehensive view of how brand equity is formed and perceived from a consumer's perspective in higher education.

The research uses a consumer-based approach to brand equity, focusing on students' perceptions, attitudes, and experiences as the main consumers of educational services. It explores how students perceive the value and prestige of institutions, differentiate between them, and how these perceptions affect their choices of universities and loyalty. This perspective aims to reveal insights into the effectiveness of branding strategies from the students' viewpoint.

The research includes four prominent Grant-in-aid higher education institutes in Gujarat, India: The Maharaja Sayajirao University of Baroda, The Sardar Patel University, The Veer

Narmad South Gujarat University, and The Saurashtra University. These institutions offer diverse educational offerings, historical contexts, and cultural flavors with educational services. The study aims to provide a representative overview of brand equity dynamics in Gujarat's higher education sector.

The study specifically targets the perspectives of current students enrolled in these Grant-in-aid higher education institutes. This demographic is crucial as they are the primary stakeholders who interact with and are directly impacted by the brand equity of their institutions. By gathering insights from current students, the research captures real-time perceptions and attitudes, enabling a nuanced understanding of how brand awareness, image, and heritage influence student experiences and satisfaction. The focus on current students also provides valuable feedback for institutions seeking to enhance their branding strategies and student engagement efforts.

3.9 CONCEPTUAL FRAMEWORK OF THE RESEARCH STUDY:

Brand equity has been conceptualized in various ways, yet there have been relatively few empirical studies within a service context. Aaker (1991a) introduced the first comprehensive model of brand equity, identifying five key dimensions: brand name awareness, brand associations, perceived quality, brand loyalty, and other proprietary assets, such as patents, channel relationships, and trademarks.

Keller (1993) introduced a customer-based brand equity model centered on familiarity and awareness, as well as strong, favourable, and unique brand associations. He argued that brand equity is primarily determined by brand knowledge, which encompasses awareness, attributes, benefits, images, thoughts, feelings, attitudes, and experiences.

Over time, these and other models have been tested in various contexts. Faircloth et al. (2001) examined the relationship between brand image, brand attitude, and brand equity using the models proposed by Aaker (1991a) and Keller (1993). Their findings partially supported both models, demonstrating that brand image and attitude contribute to brand equity, though the role of brand awareness was not explicitly assessed. Yoo and Donthu (2001) developed a

"multidimensional consumer-based brand equity scale (MBE)" grounded in Aaker's and Keller's models, with a particular focus on brand awareness, perceived quality, associations, and loyalty. Their study offered a generalized measure of brand equity and underscored the distinct impact of different brand equity dimensions. In a comparative study, Cobb-Walgren et al. (1995) investigated how the main dimensions of consumer-based brand equity influence purchase intent, drawing on Aaker's (1991a) and Keller's (1993) conceptual frameworks.

Specifically, within the service sector, Muller (1998) explored the determinants of brand equity in the restaurant industry, identifying product or service quality, service delivery, and symbolic image as key factors. In the hotel industry, Prasad and Dev (2000) studied brand performance and brand awareness as dimensions of brand equity, developing a hotel brand equity index. In financial services, Mackay (2001) utilized a "hierarchy of effects model," focusing on market share as an indicator of brand equity. Kim et al. (2003) applied Aaker's (1991a) model in their study of the hotel industry, with empirical analysis showing that brand loyalty, perceived quality, and image were more significant in determining brand equity than brand awareness.

In the context of higher education (HE), brand image is particularly important in mitigating the risk associated with these services, as quality is often assessed post-consumption (Byron, 1995; Binsardi and Ekwulugo, 2003; Chen, 2008). A strong brand serves as a risk reliever, simplifying the decision-making process (Erdem and Swait, 1998; Chen, 2008). The brand acts as a differentiation tool, offering cues to consumers during their decision-making (Temple, 2006; Lockwood and Hadd, 2007; Chen, 2008). Additionally, several factors directly influence the evaluation of educational quality and, consequently, the perception of a university's brand (Kurz et al., 2008). These factors include staff quality, location, size, history, and international agreements (Mazzarol and Soutar, 2008; Binsardi and Ekwulugo, 2003; Chen, 2008; El Mahdy and Mourad, 2008; Mourad, 2010). Many universities have adopted brand management strategies to improve their rankings in HE markets (Brunzel, 2007). Furthermore, the social image of an educational institution and its overall market position significantly influence the HE brand, impacting the selection process (Paden and Stell, 2006).

Existing research on brand equity reveals a degree of commonality regarding the drivers of brand equity, although there are inconsistencies and overlaps in the relationships between key variables and in the structuring of models, particularly in distinguishing between determinants and dimensions.

The model used in this paper builds on Keller's work and, to a lesser extent, Aaker's. Following Keller (1993), brand equity is presented as a two-dimensional construct based on brand awareness and brand image. Brand loyalty is treated as an outcome of brand equity rather than as one of its dimensions. Aaker (1991a) defined brand awareness as the ability of a potential consumer to recognize a brand as a member of a specific product category, emphasizing that awareness and recognition are essential before attaching attributes to the brand. While brand awareness is about linking the brand to a product category, brand image involves the associations an individual makes with the brand. Aaker (1991a) described a "brand association" as anything linked in memory to a brand, and collectively, these brand associations define a brand image (De Chernatony, 2001; Keller, 1993). Brand associations can include various attributes, such as perceived quality, brand name, and product features. A wide range of factors have been identified as determinants of brand equity, recognizing that certain attributes may pertain to the awareness dimension while others relate to the image dimension. Using a modified approach suggested by Vorhies (1997), these determinants have been categorized under several distinct headings.

(1) Service attributes – These attributes like price, perceived quality, and after-sales-service etc. play a critical role in determining the service quality of higher education institutes. There are many other factors which determine the service quality but, the current research study focuses on the above mentioned three factors only.

(2) Symbolic attributes - This concept involves associations linked to brand personality and identity, and in our proposed model, it reflects the university's overall image and reputation (Byron, 1995; Cheng and Tam, 1997; Keller, 1993; Kent et al., 1993; Scott, 2000; Smith and Ennew, 2000; Chen, 2008; Temple, 2006).

(3) Provider attributes - These attributes pertain to the organization itself, its staff, and other factors such as location (Booth, 1999; Scott, 2000; Chen, 2008; Kurz et al., 2008), country of origin, size (Cheng and Tam, 1997; Kent et al., 1993; Scott, 2000; Smith and Ennew, 2000), and history. In our proposed model, these attributes also encompass the relationship between students/parents and the faculty/staff (Scott, 2000; Chen, 2008).

(4) Consumer attributes - These attributes are connected to the consumers' socio-economic characteristics and their experiences with the brand. In the proposed model, they represent student-related factors, including academic qualifications, motivations, career interests, and prior experiences with the provided service (Keller, 1993; Lockwood and Hadd, 2007).

(5) Marketing activities - This encompasses all marketing activities undertaken by higher education institutions, along with word-of-mouth communication (Booth, 1999; Chen, 2008; Kent et al., 1993; Scott, 2000).

(6) Product attributes- These attributes encompass aspects such as the perceived quality of the education service (Cheng and Tam, 1997; Kent et al., 1993; Scott, 2000; Smith and Ennew, 2000; Kurz et al., 2008; Chen, 2008), tuition fees (Booth, 1999; Keller, 1993; Chen, 2008), and guarantees and after-sales service (Vorhies, 1997; Kent et al., 1993). Additionally, they include university-related factors such as course availability, admission criteria, tuition fees, and graduate employment rates.

(7) Brand heritage – These relate to the five major elements that indicate whether and to what extent heritage is present or potentially found in a brand. In context of Higher education institutes, they are track record, longevity, core values, use of symbols, and history.

(8) Customer perceived value – a brand with a heritage creates and confirms expectations about future behavior to stakeholder groups and makes a promise that the brand will

continue to deliver on these commitments (Aaker 1996, George 2004). For this reason, the brand heritage construct can add consumer perceived value and can minimize consumers' buying risk (Muehling and Sprott 2004). In order to enhance current understanding of value students' perception in view of a heritage brand, the question of what really adds value in consumer's perception is defined in this research study through four latent customer perceived value dimensions – economic value, functional value, affective value, and social value.

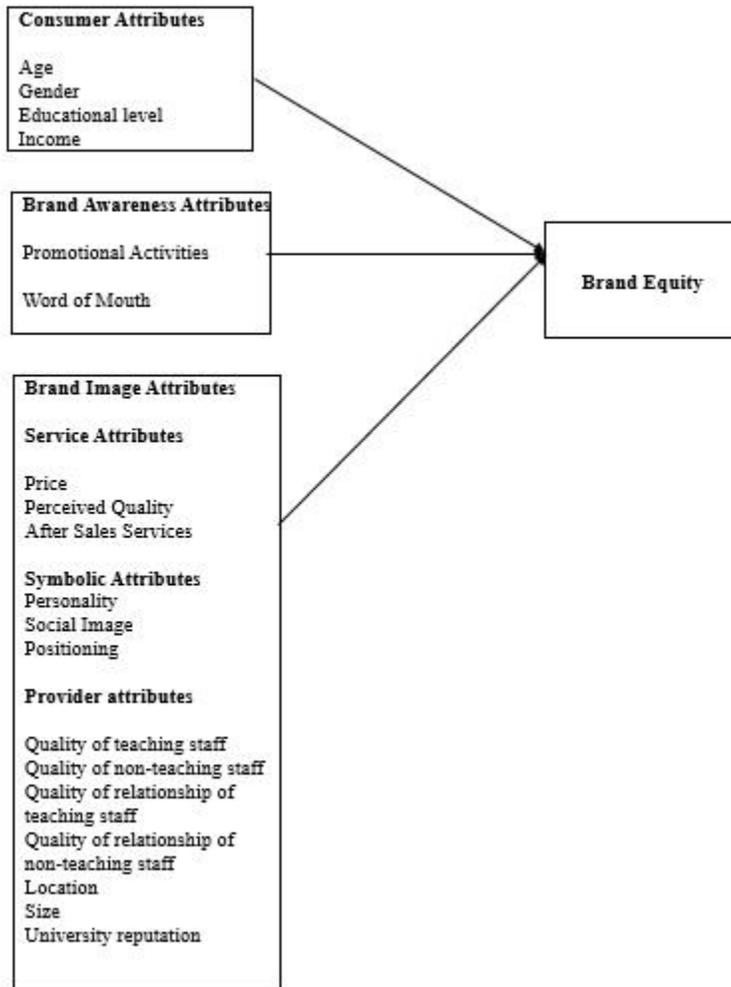**Fig. 3.1: Proposed Conceptual Model of Brand Equity in Higher Education Service**
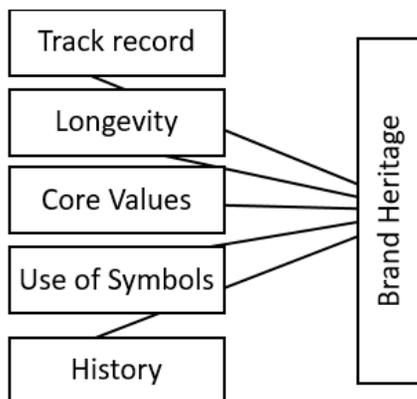

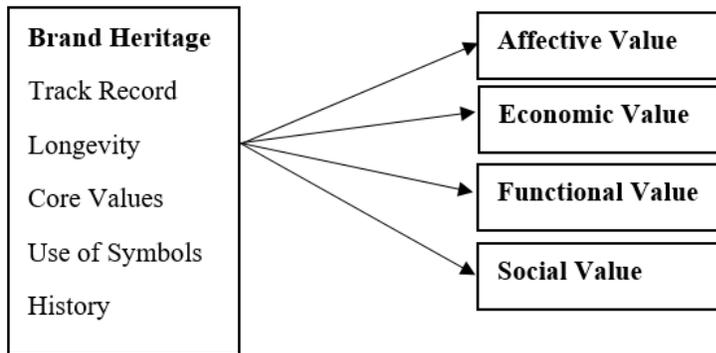**Fig. 4: Antecedents of Brand Heritage**

Fig. 5: Brand Heritage and Consumer Perceived Value Dimensions

To achieve the research objectives, extensive review of literature was undertaken by the researcher and a conceptual model was developed as given in Fig. 3.1. The model incorporates various independent and dependent variables. Brand awareness, brand image and consumer attributes are the independent variables of this research study and brand equity of higher education institute is the dependent variable. The main aim of the proposed conceptual framework is to assess the impact of selected independent variables on Brand equity of HEIs on dependent variable.

3.9.1 Consumer Attributes

These attributes are connected to the consumer's socioeconomic characteristics with regard to the brand. In the proposed model, consumer attributes include age, gender, educational level, and Income. (Lockwood and Hadd 2007).

3.9.2 BRAND AWARENESS

Brand awareness is associated with how strong the brand is in the customer's memory which is reflected in the customer's ability to remember or perceive a brand under various conditions (Keller, 2009). According to Aaker (1991, p. 61), brand awareness is "the ability of buyers to recognize or recall that a brand belongs to a particular product category."

- **Promotional activities**

Promotional activities are defined in research as strategic efforts that encompass various marketing tools and techniques to inform, persuade, and influence consumers towards a product or service. These activities aim to enhance consumer awareness, stimulate interest, and ultimately drive purchasing behaviour.

- **Word of Mouth**

Katz and Lazarsfeld (1966) define word of mouth (WOM) as the sharing of marketing information among consumers, which significantly impacts their behaviors and attitudes toward products and services.

3.9.3 BRAND IMAGE

Brand image is the key driver of brand equity, which refers to consumer's general perception and feeling about a brand and has an impact on consumer behaviour Zhang (2015).

Brand image can be described as perceptions about a brand as reflected by the cluster of associations that consumers connect to the brand name in memory (Rio,A., B., Vazquez, R., Iglesias, R. (2001).

3.9.3.1 Service attributes

These pertain to factors like the perceived quality of the educational service (Kurz, Scannell, and Veeder 2008; Chen 2008), range of courses, study method and quality management.

- **Price**

"Price" refers to the tuition fees that the prospective students are required to pay. For higher education institutions, tuition is a critical source of revenue. Tang, Tang, and Tang (2004) noted that the number of universities relying on tuition as a primary revenue source is increasing. Price significantly influences marketing strategies, as

most students and parents are concerned about the financial implications of attending a university (Pugsley, 2004; Pennell & West, 2005; Hemelt & Marcotte, 2011). Moreover, a rise in tuition fees can significantly reduce student enrollment (Dearden, Fitzsimons & Wyness, 2011).

- **Perceived Quality of Service**

Perceived quality refers to a consumer's evaluation of a company's ability to deliver superior product value (Parasuraman, 1998). Some researchers consider perceived quality to be personal and subjective, with consumers assessing whether a product is worth buying and reflecting on their experience using it (Chen, 2001; Kakkos et al., 2015; Olsen, 2002). Product attributes related to perceived quality include the quality of educational services, tuition fees (Booth, 1999; Keller, 1993; Chen, 2008), guarantees, and after-sales service (Vorhies, 1997; Kent et al., 1993). Additionally, factors associated with universities, such as course availability, admission criteria, tuition fees, and graduate employment rates, are also considered.

- **Service benefits**

In higher education, service benefits are apparent in several key areas. Institutions enhance employability by offering career services, internships, and job placement support. Personal development is promoted through opportunities for critical thinking, leadership, and extracurricular activities. Universities also enable students to follow their passions with specialized programs and courses. Moreover, campus events, professional networks, and alumni connections support sociability and networking, contributing to both personal and career advancement.

- **After Sales Service**

After Sales service refers to the support and assistance provided to students throughout the tenure of their academic programme and after also once they are enrolled for a program or course. This includes services such as academic advising, career counselling, alumni networking opportunities, and ongoing assistance with

coursework or research projects job/ career opportunities. In the realm of higher education, after-sales service plays a key role in building and maintaining brand equity by ensuring student satisfaction, fostering loyalty for more higher studies from the same institution and enhancing the overall educational experience.

3.9.3.2 Symbolic attributes

This includes associations related to brand personality and identity. In the proposed model, it represents the overall image, social responsibility, innovation, and international orientation of the faculty (Cheng and Tam 1997).

- **Perceived Brand Personality**

  Perceived brand personality in the context of brand equity research on higher education institutes refers to how individuals perceive the characteristics, traits, and values associated with a particular university or college.

  Perceived Social Image

- "Perceived social image" in the context of research on brand equity of higher education institutes refers to the subjective impressions and beliefs that individuals have about a particular institution within their social circles or society at large. It encompasses how the institution is perceived in terms of its reputation, social standing, and the esteem it commands among various stakeholders such as students, alumni, employers, and the public.

- **Perceived Brand Positioning**

  Perceived brand positioning in the context of brand equity for higher education institutes refers to how a university or college is perceived and positioned in the minds of its target audience, including students, faculty, alumni, and other stakeholders. It encompasses factors such as the institution's reputation, image, identity, perceived quality of

education, unique selling propositions, and overall value proposition compared to its competitors.

3.9.3.3 Provider attributes

These attributes relate to the organization itself, the staff providing the service, and factors such as location (Booth, 1999; Scott, 2000; Chen, 2008; Kurz et al., 2008), country of origin, size (Cheng and Tam, 1997; Kent et al., 1993; Scott, 2000; Smith and Ennew, 2000), and history. In the proposed model, these attributes also include the relationships between students/parents and faculty/staff (Scott, 2000; Chen, 2008).

- **Quality of teaching staff**

De Chernatony and McDonald (1998) emphasize that the quality of teaching staff is vital in shaping a higher education institution's brand and reputation. High-quality educators are characterized by their strong academic credentials, effective communication skills, and enthusiasm. They foster meaningful learning experiences and innovate in teaching methods, significantly enhancing the institution's perceived value.

- **Quality of relationship with teaching staff**

The relationship quality between teaching staff and students is crucial for creating a productive learning environment in higher education. Scott (2000) and Chen (2008) assert that robust, positive relationships are established through mutual respect, open communication, and active support for student development.

- **Quality of relationship with non- teaching staff**

In higher education, the quality of the relationship between non-teaching staff and students is essential for enhancing the overall student experience. Scott (2000) and Chen (2008) highlight that these relationships are strengthened through responsiveness, effective communication, and a supportive approach to student needs.

- **Location**

The location of higher education institutions greatly affects their appeal and accessibility to students, as outlined by Booth (1999), Scott (2000), Chen (2008), and Kurz et al. (2008). Key factors include accessibility and convenience, with Booth emphasizing the importance of proximity to transportation and urban centers. Scott highlights the role of a vibrant cultural and social environment in enhancing the student experience. Chen points out that locations with strong economic activity offer improved opportunities for internships and employment, impacting student enrollment decisions. Additionally, Kurz et al. stress the significance of a safe, welcoming community in increasing student satisfaction and retention.

- **Size**

The size of higher education institutions, as discussed by Cheng and Tam (1997), Kent et al. (1993), Scott (2000), and Smith and Ennew (2000), refers to the scope and scale of an institution's operations, which can be measured by factors such as student enrolment numbers, faculty and staff count, campus area, and the range of academic programs offered. Larger institutions typically offer a more diverse array of programs and resources, which can enhance research opportunities and student life but can also pose challenges in maintaining personalized student support and community cohesion. Conversely, smaller institutions often provide a more intimate educational environment with closer faculty-student interactions but may have limited program offerings and resources. The size of an institution can influences its strategic priorities, operational efficiency, and the overall student experience.

University Reputation

A university's reputation in higher education is shaped by several key factors that collectively define its academic and professional standing. High academic standards and competitiveness attract top-tier students and faculty, reflecting the institution's commitment to excellence. Offering a diverse and unique range of programs further enhances its appeal by catering to various interests and fostering innovation. Distinguished alumni underscore the university's

success in producing influential graduates, while a vibrant campus life enriches the student experience. The preference of companies to recruit its graduates signals the university's effectiveness in preparing students for the job market. Together, these elements solidify the university's reputation, making it a prestigious choice for both students and employers.

3.9.4 BRAND HERITAGE AND CONSUMER PERCEIVED VALUE DIMENSIONS

Urde, Greyser, and Balmer define the brand heritage construct as part of a corporate brand identity: "a dimension of a brand's identity found in its track record, longevity, core values, use of symbols and particularly in an organisational belief that its history is important" (2007, pp 4-5)

Dimensions of Brand Heritage

- **Track Record**

The element track record is associated with the established performance that the brand or company has related to, such as certain principles and commitments over time. (Urde 1997)

- **Longevity**

In brand heritage research, longevity refers to the duration over which a brand has been established and recognized. It reflects the brand's ability to endure over time, maintaining its relevance and connection with consumers across different periods and market conditions.

- **Core Values**

Core values are long-standing principles of the brand that serve as the foundation for its positioning, expressed as a promise or commitment through both external and internal communications. (Urde, 2007).

- **Use of Symbols**

In brand heritage research, symbols play a vital role in conveying a brand's historical identity and values. Symbols such as logos, emblems, packaging, and design elements act as tangible representations of a brand's legacy, helping to create a sense of continuity and authenticity

over time. They serve as visual cues that connect consumers to the brand's past, reinforcing trust and emotional attachment (<u>University Digital Conservancy</u>).

- **History**

History refers to the long-term existence and track record of a brand, encompassing significant achievements, milestones, and the sustained adherence to core values over time.

Dimensions of Consumer Perceived Value

- **Economic value**

Economic value refers to the financial worth or benefit derived from the historical significance, reputation, and legacy associated with a brand. It encompasses the tangible and intangible assets that contribute to a brand's market position, pricing power, and customer commitment over time.

- **Functional value**

Functional value typically refers to the tangible or utilitarian benefits that consumers gain from a brand's historical legacy or heritage. These benefits could include the reliability, durability, performance, or efficiency of products or services associated with the brand's longstanding reputation and tradition.

- **Affective value**

Affective value encompasses the emotional responses elicited by a brand's heritage, which can enhance consumer loyalty and trust by fostering a deeper emotional connection with the brand. The affective value derived from brand heritage reflects consumers' emotional ties and the sentimental value they place on the brand's history and legacy (Emerald Insight)

- **Social value**

Social value reflects consumers' connections to the brand's heritage, traditions, and narratives, fostering a sense of identity, belonging, and pride among its stakeholders.

Social value typically refers to the significance that a brand holds within society beyond its functional attributes. It encompasses the emotional connections, cultural meanings, and historical associations that consumers attach to the brand.

3.10   SELECTION OF GRANT- IN-AID HIGHER EDUCATIONAL INSTITUTES

OF GUJARAT:

3.10.1 The Maharaja Sayajirao University of Vadodara

The Maharaja Sayajirao University of Baroda (MSU) is recognized as one of the premier institutions of higher learning and research in the country. Since its inception in 1949, the University has demonstrated a keen interest and a commitment to the sustenance and promotion of an environment, favorable to the growth and development of an academic excellence – a commitment that forms a part of the rich legacy of the institution.

The Maharaja Sayajirao University of Baroda traces its origins to the "Baroda College," established in 1881 by Maharaja Sayajirao Gaekwad III as one of the oldest centers of learning in Western India. In 1909, the visionary ruler also founded the "Kala Bhavan." Maharaja Pratapsinhrao Gaekwad later pursued the idea of establishing a university. Following a committee's recommendation, the Government of Baroda, through order No. (R) 169-39 on February 21, 1949, decided to establish a residential university. The Legislative Assembly passed the bill, and with the assent of Maharaja Pratapsinhrao Gaekwad on April 29, 1949, the Maharaja Sayajirao University of Baroda was officially established on April 30, 1949. The Maharaja Sayajirao University of Baroda, a State University with English as its medium of instruction is a premier unitary residential University, established on 30th April, 1949 recognized by Government of India under the Indian Universities Act, 1958.

The University comprises of 111 Departments under the umbrella of 14 Faculties, 3 Constituent Colleges, 8 Institutes and 13 Centers of Specialized Studies, wherein more than 46,000 students pursue higher studies under the care and supervision of more than 1450 highly qualified and experienced teaching staff.

The University has 16 Hostels, Health Centre, Sports Ground, Convocation Ground, Press and Stationery Unit, Guest House as well as other academic and administrative units spread across the campus. Besides, there are 9 Multipurpose Auditoriums, 8 well equipped Seminar Halls, 2 Open Air Theatres, an Amphitheatre, a Play Box, an Art Gallery, an Arboretum, a Botanical Garden, several lecture theatres and conference rooms.

The Maharaja Sayajirao University of Baroda offers a comprehensive range of academic programs from early childhood education to undergraduate and postgraduate levels, including Ph.D. programs. It employs a Choice Based Credit System (CBCS), allowing students to choose value-added subjects of interest beyond grant-in-aid programs. The university features innovative science and technology courses in fields such as Cell and Molecular Biology, Nanotechnology, Petroleum Geology, Medical Biotechnology, Bioinformatics, and more through cutting-edge research centers like the Centre for Biotechnology and Prof. Bharat Chattoo Genome Research Centre.

The university also provides socially relevant and job-oriented programs such as M.E. in Microelectronics & VLSI Design, Master of Urban and Regional Planning, and P.G. Diplomas in Strategic Human Resource Management and Food Service Management, along with Bachelor and Master of Design degrees. Certificate courses in areas like Temple Management, Diet and Healthy Living, Sports Nutrition, and Fitness Management are also offered.

The university collaborates extensively with industry and civil society for curriculum development and updates. It has signed MOUs with international universities like the University of Cambridge, University of Laval, and University of Stuttgart for student and teacher exchanges, enriching the curriculum from a global perspective.

The Centre for Life Long Learning and Extension provides 36 short-term and 22 long-term courses in Ancient Indian Studies, Art and Craft, Human Social Development, Language Proficiency, Computer Education, Cookery, and Personal Grooming.

Smt. Hansa Mehta Library serves as the central library, supported by 13 constituent and 25 departmental libraries, housing over 800,000 books and periodicals and 14,000 digitized dissertations and theses. It features the largest air-conditioned reading room in the region, accommodating 1,600 readers and open 14 hours daily.

The All India & Central Services Training Centre prepares students for UPSC, State PSC, and SSC exams and offers guidance for exams like NDA, CDS, IB, SHO, Police, and RBI.

MSU hosts one of the largest hostel campuses in western India with 12 boys' and 4 girls' hostels featuring modern amenities. The online hostel admission process streamlines room allocation for students. The University Health Centre provides routine medical care, including physiotherapy, a pathology laboratory, and a counselling center.

The university offers extensive sports facilities, including outdoor fields for athletics, cricket, hockey, football, tennis, basketball, volleyball, kabaddi, kho-kho, and a swimming pool. Indoor facilities include table tennis, badminton, a gymnasium, and a multipurpose hall. Besides an Incubation Centre and Start Up Centre set up at the campus encourages the spirit of innovation and provides a platform to the youth for exploration and implementation of innovative ideas and their conversion into start-up ventures.

The University has consistently been a leader in advancing educational policy. During the recent pandemic, it swiftly adapted by launching a wide range of online programs and transitioning successfully to online teaching and evaluation. The University also organized numerous initiatives to promote the principles of the National Education Policy and has made notable progress in its implementation.

These efforts position The Maharaja Sayajirao University of Baroda as a leading institution in the field of higher education and research.

3.10.2 Sardar Patel University, Anand

It is named after the iron man of India Vallabhbhai Patel, and was founded in October 1955 by an Act of the Legislative Assembly of the then-Bombay Province and was UGC recognized under 2(f) of the UGC Act in October 1968.

The university has a great legacy of about 65 years. The jurisdiction of the university is spread over Anand and Kheda districts of Gujarat state. The university provides education through its 27 departments and one constituent college. It has 116 affiliated colleges also.

Pollution-free, clean and lush green environs greet you as you arrive in Vallabh Vidyanagar and Sardar Patel University campus. The University today spreads over a total land mass of 86 acres with a main campus and 4 satellite campuses.

The main campus, which houses the University Administrative Office with offices of all the important University Officials, all the sections of the University, Old Senate Hall and Syndicate room, besides SC/ST Cell, External Courses Cell, IQAC, International Students Centre, is spread over 21.060 acres, with a built-up are of 85,253.10 sq.mts.

3.10.3 Veer Narmad South Gujarat University, Surat

Veer Narmad South Gujarat University (VNSGU) was established in 1965 by the South Gujarat University Act and opened in 1966. It was incorporated as a university on May 23, 1967 and recognized by the University Grants Commission (UGC) in 1968. In 2004, the university was renamed after the Gujarati poet Veer Narmad, whose real name was Narmadshankar Labhshankar Dave

Veer Narmad South Gujarat University (VNSGU) aims to contribute to higher education and regional development by providing trained personnel in various fields, aligning with nation-building goals. The university is dedicated to maintaining high

standards in undergraduate and postgraduate teaching, promoting research, and engaging in extension activities to benefit all societal sectors.

Since its establishment, VNSGU has sought to excel in higher education, addressing regional needs and global trends. Located in Surat, the semi-urban university spans 210 acres.

The university serves the developmental needs of seven districts and two Union Territories, striving to realize their potential across technology, business, industry, commerce, language, culture, and fine arts. Its core objectives, as outlined in the University Act, include maintaining high standards in teaching and awarding degrees, as well as promoting research and extension activities relevant to regional and national interests.

Veer Narmad South Gujarat University (VNSGU) serves the districts of Surat, Navsari, Valsad, Narmada, Dangs, Bharuch, Tapi, and the Union Territories of Daman and Dadra and Nagar Haveli. The university campus hosts 25 postgraduate departments and institutes offering 95 programs with multiple specializations, including 19 M.Phil and 19 Ph.D. programs.

VNSGU oversees 34 government, 59 grant-in-aid, and 190 self-financed colleges, along with 104 postgraduate teaching centers affiliated with these colleges. It offers 36 postgraduates, 4 graduate, 3 integrated, and 9 PG diploma programs, plus 5 certificate programs, many of which are self-financed and follow a semester credit-based system.

Over 4,000 students' study in its postgraduate departments, which are organized into twelve faculties: Arts, Commerce, Science, Education, Management Studies, Rural Studies, Engineering and Technology, Medicine, Law, Computer Science, Homoeopathy, and Architecture. The university promotes an academic environment conducive to students' integral development, with an emphasis on interdisciplinary studies that foster new research fields.

Veer Narmad South Gujarat University offers a wide range of student-centric amenities and centers on its campus to support academic and personal growth. The

University Central Library houses over 200,000 books, numerous journals, and digital resources, along with specialized collections on non-violence and spiritual values. The campus features research and study centers, such as the Research Repository Centre, Shri B. V. Botanical Research Centre, and IBM Excellence Center, as well as facilities for women's studies and competitive exam training. Student welfare is supported through health services, a grievance redressal cell, a career counseling cell, and various development cells. The campus includes accommodation options like hostels and guest houses, and amenities like dining halls, seminar halls, sports facilities, and a gymnasium. Advanced technological infrastructure includes an optical fiber network, Wi-Fi zones, an informative website, and a VNSGU Android app. Recreational spaces include Nakshatra Van, gardens, and sports grounds. The university also offers transportation services, facilities for the differently-abled, and general amenities such as banks, ATMs, and a post office. Committed to excellence, VNSGU continually revises its syllabi and introduces new courses to create a knowledge society that upholds rigorous scholarship and high ethical standards, meeting the challenges of 21st-century India.

3.10.4 Saurashtra University, Rajkot

The Saurashtra University was created on a rigorous demand, for a separate university out of Gujarat University (Ahmedabad), from the eminent educationists and freedom fighters of the Saurashtra region. The demand was more prominent after the creation of Gujarat state on May 1, 1961. The Saurashtra University Act was passed by the Legislative Assembly of Gujarat in the year 1965(Gujarat Act No. 39 of 1965). Saurashtra University, established on 23rd May, 1967, having two headquarters in the initial stage i.e. Rajkot and Bhavnagar. After the incorporation of the Bhavnagar University, Rajkot became the sole headquarters of the Saurashtra University. The campus of the University is spread over 363 acres of land. The present jurisdiction of the University includes Amreli, Jamnagar, Rajkot, Surendranagar, and Morbi districts. It has 29 Post Graduate Departments on its campus and 238 affiliated colleges.

The University has important seats of learning spreading knowledge in the respective fields i.e. Nehru Chair, Baba Saheb Ambedkar Chair, Sardar Vallabhbhai Patel Chair, Swami Dayanand Saraswati Chair, Gulabdas Broker Chair, etc. The University runs a centre of learning and research in the name of Shri Zaverchand Meghani i.e. Meghani Lok Sahitya Kendra. The University in collaboration with Commissionerate of Industries, Government of Gujarat, and Department of Science and Technology, Government of India, has started National Facility for Drugs Discovery (NFDD) in the year 2009. The NFDD is a state of art centre of research and innovation. Later in the year 2014, the NFDD was transformed into Centre of Excellence (COE). COE is actively involved in generating funds from industrial consultancy.

The Saurashtra University is vibrant in terms of organising youth festivals, cultural programmes, job fairs, e-Tab distribution fairs, Ranji Trophy tournament, Pro Kabaddi League, Saurashtra Premier League (SPL), inter university championships, etc. The Saurashtra University students are performing well in various events at state and national levels.

The Saurashtra University has a prospective plan to be the leader in the field of higher education. The University is determined to establish state of art research laboratories in the area of applied and pure sciences. It will be a prime focus for the University to rank in top fifty Universities of National Institutional Ranking Framework (NIRF).

3.11 RESEARCH DESIGN

Research design refers to the overall strategy utilized to carry out research. A well-planned research design helps ensure that your methods match your research aims, that you collect high-quality data, and that you use the right kind of analysis to answer your questions, utilizing credible sources. This allows you to draw valid, trustworthy conclusions. The research design is defined by different authors differently. (Creswell, 2014) defines research design as a procedure used in collecting and analyzing the measures of the variable as specified in research problems. (E.Spector, 1981) defined that any scientific investigation, be it in the social or natural science, must begin with some structure or plan, which defines the number

and types of variables to be studied and their relationship to one another this structure is termed as Research Design.

Since the study focuses on identifying and analyzing factors influencing consumer behavior towards the purchase of green household appliances, a descriptive research design is deemed to be the most appropriate. **Descriptive design** defines and describes the researches who, what, when, where, why and how, which are some of the questions raised in this study. It involves a sound and scientific analysis of data with the help of measure of central tendency, measures of variation, hypothesis testing, correlation and the regression analysis. Thus, it is also an **analytical design** of research.

3.12 SOURCES OF INFORMATION

3.12.1 Primary data:

Primary data was collected using a non-disguised, close-ended questionnaire administered to students from selected higher education institutions in Gujarat, India. A five-point Likert scale, covering a range from 1 (strongly Disagree) to 5 (strongly agree), was applied to gather responses on various study parameters. The questionnaire was pre-tested through a pilot study where responses from 150 students were collected, and essential modifications were implemented based on the pilot study outcomes before administering the final version. Appropriate Likert scales were chosen according to the specific parameters and variables under study.

3.12.2 Secondary data:

Secondary data was obtained from credible and trustworthy sources such as published research papers, articles, research reports, newspapers, and various reputable websites. Additional information for the study was gathered from books, e-books, online literature, magazines, journals, and electronic media, using both online and offline methods.

3.13 DESIGNING OF STRUCTURED NON- DISGUISED QUESTIONNAIRE:

The researcher conducted an extensive review of literature from both Indian and international sources to identify relevant variables for the study. Following this comprehensive review, the most suitable variables were chosen for drafting the questionnaire. Consumers were requested to evaluate their perception in relation to awareness, image, and heritage of selected Grant in Aid higher educational institutes to measure brand equity using Likert Scale. Age, Gender, Educational Qualification, Annual Income etc. were among the selected demographic variables.

Pilot testing was done on the structured non- disguised questionnaire before finalizing the instrument. Following is the list of selected references used for drafting some constructs of the questionnaire.

- Consumer attributes ((Lockwood and Hadd 2007).

- Brand awareness (Lasser *et al.*, 1995; Aaker, 1996; Netemeyer *et al.*, 2004; Buil *et al.*,2008; Tong and Hawley, 2009)

- Perceived quality (Aaker, 1991, 1996; Buil *et al.*, 2008; Pappu *etal.*, 2005, 2006; Yoo *et al.*, 2000; Yoo and Donthu, 2001; Tong and Hawley, 2009),

- Promotion activities (Chen 2008).

- Service attributes (Kurz, Scannell, and Veeder 2008; Chen 2008),

- Symbolic attributes (Cheng and Tam 1997)

- Brand Heritage Wiedmann et al. (2011a, 2011b)

The research instrument (questionnaire) was divided into below mentioned five sections

Section – 1 Socio - Demographic Section:

The socio-demographic section of a questionnaire is designed to gather essential background information about the respondents, providing a foundation for analyzing the data in relation to various personal characteristics. This section typically includes questions about name, age,

and gender to establish basic identity and demographic groupings. It also inquiries about employment status and education level, offering insight into the respondent's professional and academic background, which will be critical for understanding perspectives or experiences in relation to the research study. Additionally, asking about the course being pursued and the name of the university will help to contextualize the respondent's academic environment and field of study. Questions about the name of the faculty they are associated with provide further specificity, enabling more detailed segmentation of responses based on academic disciplines. Finally, whether respondents are living on campus or off campus will offer valuable data regarding lifestyle and access to resources, which may influence their responses or experiences. Collectively, these socio-demographic questions will help researcher to segment and analyze the data effectively, drawing meaningful insights from the study.

Section – 2 Factors Influencing the Choice of University:

When students choose a university, several factors influence their decision, reflecting their priorities and expectations. Geographic location impacts convenience and lifestyle, while programme offerings and their academic quality determine educational opportunities. A university's brand name can enhance resumes and future opportunities. Location affects accessibility and experience, while administrative quality and facilities influence support services. Fees and costs impact affordability, while campus safety, amenities, and accommodations are crucial for well-being. Accreditation by national and international bodies ensures educational standards. The university's image, heritage, and culture contribute to its appeal. Campus placements, career opportunities, and corporate collaborations affect future prospects, and distinguished alumni, alliances, and memberships enhance credibility and networks. These factors collectively shape students' perceptions of a university's value and suitability for their academic and career goals.

Including this section in a questionnaire is important as it helps understand which factors are most significant to students when choosing a university. By identifying these priorities, institutions can better tailor their offerings and improve areas that matter most to prospective students

Section -3 Students' Perception Towards Brand Equity Dimensions on Higher Education Institutions

In studying students' perception of brand equity dimensions in higher education institutions, the focus is on understanding how students view the institution's brand awareness and brand image. Brand awareness includes overall awareness and the effectiveness of marketing activities that influence students' knowledge and recognition of the institution. This involves assessing how well-known the university is and how its marketing efforts shape students' perceptions. Brand image is subdivided into service attributes, provider attributes, and symbolic attributes. Service attributes relate to the quality of academic programs, faculty, and student services, core educational quality, physical environment, pedagogy while provider attributes involve the geographical location of the university, its size and reputation. Symbolic attributes capture the emotional and psychological associations students have with the institution, such as perceived social image, brand positioning and brand personality. These dimensions are included in the questionnaire to gain a comprehensive understanding of students' current perceptions and to assess the institution's brand equity.

Section – 4 Students' Perception Towards Brand Heritage Dimensions on Higher Education Institutions

The concept of brand heritage in higher education institutions encompasses various dimensions that significantly influence students' perceptions and decision-making processes. Understanding these dimensions will provide valuable insights into how students view and interact with educational brands. The key dimensions of brand heritage include track record, longevity, core values, use of symbols, and history. Students' perceptions on these brand heritage dimensions are critical in shaping their attitudes and decisions regarding higher education institutions. Each of these elements contributes uniquely to the overall perception of a higher education institution's brand.

Section – 5 Students' Perceived Value Dimensions

This section examines students' perceived value dimensions in higher education, including affective, economic, functional, and social values. Affective value pertains to the emotional satisfaction students gain from their educational experience. Economic value focuses on the financial benefits, such as cost-effectiveness and potential career earnings. Functional value relates to the practical advantages, like quality instruction and skill acquisition. Social value encompasses the connections and sense of community developed during education. Understanding these dimensions aids in evaluating how students perceive the overall value of their educational experiences.

The reliability and validity check of the research instrument – Questionnaire were performed and there after a pilot study was conducted based on the responses received from the pilot study some minor modifications were made in the preliminary draft of the questionnaire and then the final draft of the questionnaire was administered to the targeted sample respondents of the study.

3.14 SAMPLING DECISIONS

3.14.1 Target Population

The target population for this research includes all students enrolled in grant-in-aid higher education institutions in Gujarat in 2022. This diverse group consists of students from different academic fields, backgrounds, and stages in their education. By focusing on these students, the research aims to capture a comprehensive view of student perspectives across various institutions in the region.

3.14.2 Sampling Frame

Sampling frame includes, published list of sampling unit or group of consumers identified target population. The sample frame comprises of the actual (current students of the Higher Educational Institutes under study) in the State of Gujarat.

3.14.3 Sampling Unit

Primary data was collected from student individuals who are currently pursuing their higher education, from the selected higher education institutes for the study.

3.14.4 Sampling Method

Convenience sampling method is used for the collection of primary data.

3.14.5 Sampling Size

A sample of 1380 respondents were selected from 4 Grant -in-Aid institutes of Gujarat. This size was determined by using the formula proposed by Naresh K. Malhotra (2007) 'Marketing Research' – An applied orientation' 6th Edition, Pearson. Page number 364. Before finalizing this, a pilot test was carried out with the sample size of 200.

The sample size was calculated in detail as follows:

Formula for determining sample size:

$$n = \frac{n\,(1-n)z^2}{D^2}$$

n = required sample size

n = the estimated population (based in researcher's judgment and estimates that 65% (0.65) of the target population will be considered)

z = suppose the level of confidence is 95% than associated z value is 1.96

D = the level precision and desired precision is such that the allowable interval is set as D = p (sample proportion) – n (population proportion) = + or -0.05

This below formula was used by Naresh K. Malhotra (2007) 'Marketing Research – An Applied Orientation' 6th Edition, Pearson, Page number 364.

Calculation of Sample Size:

$$n = \frac{n\,(1-n)z^2}{D^2}$$

$$n = \frac{0.65 \,(1 - 0.65)\,(1.96)^2}{(0.05)^2}$$

$$n = \frac{0.65 \,(0.35)\,(3.8416)}{0.0025}$$

$$n = \frac{0.8740}{0.0025}$$

n = 344.58 so, Sample size is **345**

Given a total sample size of 345, we can calculate the sample size for each of the three selected cities. as three strata, by multiplying 345 with three strata (I.e.345 x 4 = 1380)

The total sample size for the four universities is provided in the table below. As the size of population is different in all four universities, the Stratified Random Sampling method is used and university wise allocation of sample is calculated as follows. Thus, the sample size was fixed as 1380 consumers.

Stratified random sampling

$$n_1 = \frac{n\,N_1}{N}, \quad n_2 = \frac{n\,N_2}{N}, \quad n_3 = \frac{n\,N_3}{N}, \quad n_4 = \frac{n\,N_4}{N}$$

Where,

n = Total Sample size (1380)

n_1, n_2, $n_{3,}$ and n_4= required total sample size for each group. N_1, N_2 ,N_3 and N_4 = Size of population for each group (44000, 50000, 20450, 25000), N = Sum total of population of all four groups (139450)

By applying the formula sample size is calculated as follows: (Figures rounded off)

n_1 (M.S University) = $\frac{1380 \times 44000}{}$ = 441.73 (Approx. 450)

139450

So, n_1 is 450 Sample Size for M.S University.

n_2 (S.P University) = 1380 x 50000 = 480 (Approx. 480)

139450

So, n_2 is 500 Sample Size for S.P University.

n_3 (VNSGU) = 1380x 20450 = 205.30 (Approx. 200)

139450

So, n_3 is 200 Sample Size for VNSGU.

n_4 (Saurashtra University) = 1380x 25000 = 250

139450

So, n_4 is 250 Sample Size for Saurashtra University

Table 3.1: University-wise Distribution of Sample Size

Sr. No.	Selected Grant in Aid Higher Education Universities from Gujarat	Total Students as per Annual Report of Academic year 2019-2020	Calculated sample size (Figures Rounded off)
1	The Maharaja Sayajirao University	44000	450
2	Sardar Patel University	50000	480
3	Veer Narmad South Gujarat University	20450	200
4	Saurashtra University	25000	250
	Total Estimated Sample Size	**139450**	**1380**

Source: Websites of respective universities

The intended population for this study is majorly divided in four sets. The research was done on four major Grant-in-aid universities of Gujarat namely The Maharaja Sayajirao University of Baroda, The Sardar Patel University, The Veer Narmad South Gujarat University, The Saurashtra University. The total samples size of the respondents for the current study was 1380.

3.14.6 Sampling Media

The sampling media for this PhD research on Measuring, Managing and Building Consumer-Based Brand Equity of Selected Higher Education Institutes in Gujarat State, India is a non-disguised questionnaire. The questionnaire was not disguised, and the respondents were aware that they were participating in a research study.

3.14.7 Statistical Tools

The data collected from online as well as offline research will be analyzed by use of suitable descriptive and inferential statistical techniques as well as statistical tools like Descriptive Statistics (Mean and Standard Deviation), ANOVA, Regression, Co-relation, Cronbach Alpha (Reliability and Validity) and Factor Analysis were used.