CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

This chapter gives detail of the methodology used while conducting the research. The information helps in finding the gap of previous researches and framing objectives for the present study. The chapter then covers the hypothesis based on the conceptual framework of the research followed by the sampling design. This section further explains the sample, measurement and collection of data. The last section includes the tools used in analysis of the data.

SECTION I: OBJECTIVES AND HYPOTHESIS FORMULATION

3.1. Objectives of the Study

1. To study the educational models and programs promoting value-based education in selected Indian Institutions of higher learning.

   (Justification: Various educational reform bodies are promoting the relevance of value based education and also focusing on imparting value based education, but there is no clear picture of the programs and model to impart value based education in the Indian context. Every Institution has its own courses for value oriented education. So, there is need to understand and compare various programs of Value-based education. )

2. To analyze the holistic impact of value education on students’ personality development, academic stress management and academic performance.

   (Justification: The previous studies have analyzed the impact of value based education on personality development; behaviour and academic excellence of School students and these are more in the form of conceptual studies on value based education. Personality development helps in stress management. So, the objective helps in analyzing the impact on the students of Higher Education Institutions and understanding the linkage of value based education with stress management).

3. To analyze the Socio-economic constraints and challenges affecting wider dissemination of value education programs in India.
(Justification: Value based education is the need of time and can help in eradicating various problems but still not many institutions are able to focus on value-based education. The objective helps in understanding various socio-economic constraints for the same).

4. **To explore and analyze the impact of innovative ‘stress buster’ ingredients of value education in coping with academic and professional stress.**

(Justification: Various ingredients of value based education can help in managing stress. Learning of values also helps at workplace. The objective helps in analyzing whether ingredients of value based education helps in managing stress i.e. academic as well as workplace stress).

5. **To recommend suitable academic pedagogies, curriculum structure and educational strategies for promoting value oriented academic programs.**

(Justification: There are no compulsory courses or curriculum for institutions to follow for the purpose of value based education. The objective helps in recommending curriculum structure; pedagogies and strategies at different level of courses to impart value based education and improve the education framework for the overall betterment of the quality of education in India).

### 3.2. Conceptual Framework

![Conceptual Framework](source: Author’s Compilation)

**Figure 3.1: Conceptual framework of the study**
3.3. Hypothesis

3.3.1. Impact of value based education on holistic personality development

Value oriented education results in learning various values like moral, social, personal values etc, which further makes personality development of an individual as a whole. (Kalab & Shobhaa, 2015.)

\[ H_0: \text{There is no significant impact of value based education on holistic personality development of students} \]
\[ H_1: \text{There is significant impact of value based education on holistic personality development of students} \]

3.3.2. Impact of value based education on academic stress management

Value based education assist in having knowledge of all religion and involves the individual in various Co-curricular activities like sports, NSS and games etc. which helps to manage the level of stress (Paragment, 1985.)

\[ H_0: \text{There is no significant impact of value based education on academic stress management of students} \]
\[ H_1: \text{There is significant impact of value based education on academic stress management of students} \]

3.3.3. Impact of value based education on academic performance

Value based education helps in grooming various skills and making self-improvement which enhances the performance of students in academics. (Patel, 2003.)

\[ H_0: \text{There is no significant impact of value based education on academic performance of students} \]
\[ H_1: \text{There is significant impact of value based education on academic performance of students} \]

3.3.4. Impact of innovative stress buster ingredients of value based education in coping with academic stress

The aim of Value based education is to develop holistic personality which enhances the range of individual’s competency and skills and which further works as stress busters in coping mechanism (Hare, 2006.)

\[ H_0: \text{There is no significant impact of innovative stress buster ingredients of value based education in coping with academic stress} \]
\[ H_1: \text{There is significant impact of innovative stress buster ingredients of value based education in coping with academic stress} \]

3.3.5. Impact of innovative stress buster ingredients of value based education in coping with workplace stress
The aim of education is to learn and make development of students (NCERT) and the learning tends to be beneficial on later stages of managing stress efficiently. (Salami. O.S. 2011.)

\[ H_{0} : \] There is no significant impact of innovative stress buster ingredients of value based education in coping with workplace stress

\[ H_{1} : \] There is significant impact of innovative stress buster ingredients of value based education in coping with workplace stress

SECTION II: RESEARCH METHODOLOGY

3.4. Nature of study

The research is Descriptive research as the study helps to find out and describe the challenges and constraints faced in implementing value based education and also carries analytical research as it has critically evaluate the role of value oriented education on an individual and coping stress.

3.5. Sampling Techniques

The researcher has involved purposive sampling for selecting universities and further course wise categorization was done where groups of Under-Graduation, Post-Graduation, Doctoral Research and Alumni have been formed from the selected Higher Education Institutions of India. The courses of students were identified following:

<table>
<thead>
<tr>
<th>UNDER-GRADUATION COURSES</th>
<th>POST-GRADUATION COURSES</th>
<th>DOCTORAL RESEARCH COURSES</th>
<th>ALUMNI</th>
</tr>
</thead>
<tbody>
<tr>
<td>• B.Com</td>
<td>• M.Com</td>
<td>• M.Phil</td>
<td>All Courses</td>
</tr>
<tr>
<td>• B.Sc</td>
<td>• M.Sc</td>
<td>• Ph.D</td>
<td></td>
</tr>
<tr>
<td>• B.A</td>
<td>• M.A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• M.B.A</td>
<td></td>
</tr>
</tbody>
</table>

Table3.1: Four courses of respondents

The above courses were selected **on the basis of commonality** in regular courses of the selected universities and also based on students enrolled at different levels like Under-graduation Courses, Post-graduation Courses, Doctoral Research Courses and Alumni.

3.6. Geographical Area Coverage (Scope)
According to Section (2(f) and 3) of the University Grant Commission Act (1956), the universities are categories into four type which are Private, State, Deemed and Central Universities. There are total 55 universities in Uttar Pradesh

![Diagram showing the categories of universities](image)

**Figure 3.2: Universities selected for the study**

The institutions will be referred as CODE 1(Banaras Hindu University), CODE 2 (Dr. Bhim Rao Ambedkar University), CODE 3 (Dayalbagh Educational Institute) and CODE 4 (Amity University) in the following chapters to avoid any possible discomfort to the selected institutions or issues related to confidentiality.

### 3.6.1 Sample of Selected Institutions

The students (respondent) of main campus of the Universities are included in the study because quality assurance of Value Based Education is not generally assured with the affiliated colleges.

- Banaras Hindu University, Varanasi (Central University)
- Dr. Bhim Rao Ambedkar University, Agra (State University)
- Dayalbagh Educational Institute, Agra (Deemed University)
- Amity University, Noida (Private University)

### 3.6.2 Justifications of selection of universities

- The research includes total four universities from the list of total 55 universities of Uttar Pradesh and one university has been selected from each category i.e. Private, Deemed, State and Central university. Hence, the number chosen is four.
The four universities selected through purposive sampling, the institutions involves value based education in the education curriculum.

Besides the Delhi University and IITs, Banaras Hindu University and Amity University able to make entry of its name in the race of Asian Universities Ranking 2014 among the Asia's top 300 universities published by Quacquarelli Symonds (QS).

Banaras Hindu University again scored third position among India's Top 50 Universities in India Today. (Source: Magazine survey, 2014).

Among the State universities of Uttar Pradesh Dr. Bhimrao Ambedkar University is oldest university.

Ministry of Human Resource Development ranked Dayalbagh Educational Institute on 8th rank among 126 deemed universities of India (Set by P N Tondon Committee (2009).

Amity University has been ranked first Private University. (Source : Education Times, 2014)

These universities have also been identified on the basis of its educational mission, programs and curriculum structure that aims to develop overall personality of students through Value Based Education.

3.7. Sample Size

The study conducted on finite population. The researcher has used Bill Godden’s Formula to determine the sample size for the study. Bill Godden’s formula was applicable in the following way:

Sample Size: Infinite Population (where population is more than 50,000)

\[
\text{Sample Size} = \frac{Z^2 \times P(1-P)}{C^2}
\]

\[
1.96^2 \times 0.5 (1-0.5)
\]

\[
= 384.16
\]
Or = 385 (approx.)

Where:

- Z value = 1.96 on 95% level of confidence

The Z-value represents the probability that sample will fall within certain distribution. The Z value of 95% (1.96) which is universally accepted

- P = Percentage of population picking a choice, expressed as decimal which is 0.5 (50%)
- C = Confidence interval, i.e. 100- 95= +/- 5% , expressed as decimal 0.05

SAMPLE SIZE – Finite Population (where population is less than 50,000)

\[
\text{New Sample Size} = \frac{SS}{1+ (SS-1/\text{Pop})} \]

\[
\frac{385}{1+ (385-1/29810)} \]

385*29810 / 30194 = 380

Where, SS = Sample size calculated of infinite population

Pop = Population (9944+ 3370+ 1966+ 14530 = 29810)


Justification for not considering finite correction factor:

The finite population correction factor has no or negligible effect on confidence interval width because the calculated finite sample size is less than 5 % of population i.e. 380.

(Source: wps.pearsoned.co.uk)

3.7.1 Table of Total Population (as on 2014-2015)

Table 3.2: Population distributions of Universities

<table>
<thead>
<tr>
<th>COURSES</th>
<th>Banaras Hindu University (Central University)</th>
<th>Dr. BhimraoAmb</th>
<th>Dayalbagh Educational Institute (Deemed University)</th>
<th>Amity University (Private University)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A)Under Graduation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• B.Com.</td>
<td>660</td>
<td>180</td>
<td>115</td>
<td>904</td>
</tr>
<tr>
<td>• B.Sc.</td>
<td>747</td>
<td>180</td>
<td>60</td>
<td>1364</td>
</tr>
<tr>
<td>• B.A.</td>
<td>2833</td>
<td>30</td>
<td>280</td>
<td>2274</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4240</td>
<td>390</td>
<td>455</td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td><strong>B) Post-Graduation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• M.Com.</td>
<td>106</td>
<td>90</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>• M.Sc.</td>
<td>166</td>
<td>195</td>
<td>83</td>
<td>431</td>
</tr>
<tr>
<td>• M.A.</td>
<td>105</td>
<td>120</td>
<td>180</td>
<td>60</td>
</tr>
<tr>
<td>• M.B.A.</td>
<td>40</td>
<td>60</td>
<td>60</td>
<td>901</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>417</td>
<td>465</td>
<td>343</td>
<td>1412</td>
</tr>
<tr>
<td><strong>C) Doctoral Research</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• M.Phil.</td>
<td>285</td>
<td>155</td>
<td>40</td>
<td>400</td>
</tr>
<tr>
<td>• Ph.D.</td>
<td>30</td>
<td>675</td>
<td>146</td>
<td>911</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>315</td>
<td>830</td>
<td>186</td>
<td>1311</td>
</tr>
<tr>
<td><strong>D) Alumni</strong></td>
<td>4972</td>
<td>1685</td>
<td>982</td>
<td>7265</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>9944</td>
<td>3370</td>
<td>1966</td>
<td>14530</td>
</tr>
</tbody>
</table>

The sample distribution is on the population proportion as per the suggestion of experts.

### 3.7.2. Sample Composition

Table 3.3: Sample-plan in proportion of its respective population size distribution

<table>
<thead>
<tr>
<th></th>
<th>Banaras Hindu University (Central University) (= Calculated % of 125)</th>
<th>Dr. Bhimrao Ambedkar University (State University) (= Calculated % of 45)</th>
<th>Dayalbagh Educational Institute (Deemed University) (= Calculated % of 25)</th>
<th>Amity University (Private University) (= Calculated % of 185)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under-Graduation</td>
<td>52</td>
<td>5</td>
<td>6</td>
<td>53</td>
</tr>
<tr>
<td>Post-Graduation</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Doctoral-Research</td>
<td>5</td>
<td>11</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Alumni</td>
<td>62</td>
<td>23</td>
<td>12</td>
<td>92</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>125</td>
<td>45</td>
<td>25</td>
<td>185</td>
</tr>
</tbody>
</table>

#Total = University population/Total population*380; Calculated % = Population of Course of University/ Total population of university*100

### 3.8. Sources of Data

The research analyzes the educational programmes and models based on value oriented education, challenges and constraints faced while dissemination of Value education. In the modern era, when the values are degrading among youth and society in general, it increases the demand for Value Based Education not only in primary and secondary schools but also in the Higher Education Institutions of India. Although, several Institutions are providing value based educational context yet it needs to examine the impact of such educational programmes on
holistic personality as well as stress management of the students. The present research has covered primary as well as secondary data collection sources for the purpose.

3.8.1. Primary Sources
Primary data are collected through observation, interview and questionnaire (Hair et al. 2003) Primary data has focused on analyzing the impact of value oriented education on academic performance, stress management and personality development holistically. So, the questionnaire is framed with the purpose to measure the objective under research termed as Value Based Education, Holistic Personality Development, Academic Performance and Stress Management. In designing of a questionnaire, two things need to be considered i.e. Questionnaire items and the Rating Scale which are explained as under.

3.8.1.1. Questionnaire Items
The Questionnaire items are self structured with the help of various past studies in the context of Value Based Education. Personal and moral values are measured by 8 items, Intellectual values are measured by 8 items, Social values are measured by 6 items, Environmental values are measured by 4 items, Spiritual values are measured by 4 items, stress management is measured by 12 items and holistic personality development is measured by 8 items. Overall the self-structured questionnaire contains 50 items for measuring the constructs.

3.8.1.2. Rating scale
Questionnaire has been developed using the measurement tool of Likert scale where the respondents have been asked to give their responses on five points scale. Likert scale is generally used in itemized rating scale which requests the respondents to give rating to the items on either five, seven or ten points (Malhotra, 2010). It allows the respondents to rate the extent to which the respondents agree or disagree. Thus, the scale is bipolar.

3.8.2. Secondary sources
Secondary data sources involve the data from publish material like journal and papers relates to the study to gather information. It also covers reports, books, websites and other online resources for the study.

3.9. Research Tool for Analysis
3.9.1 System Dynamics

System dynamics is considered as one of the powerful methodologies to study and explain complex problems with the help of stock flow diagrams and causal loops diagrams. In the present research, it helps in defining problem dynamically described by mutual interaction, interdependence, information feedback and circular causality. It also aims to arrive at appropriate solutions for the problems which are precisely or imprecisely explained.

3.9.2 Exploratory Factor analysis (EFA)

In the present research factor analysis is used to explore the unobserved variables in the study and to identify the aspects of independent variables (factors) with the dependent variables and reduce elements and shows the interlink based on correlation. Further this tool was used to explore the unobserved variables in the study. It helps in data reduction and data summarizing.

3.9.3 Correlation

Correlation is a number shows the degree of relationship between two numbers. It is a statistical technique which shows how strongly pairs of variables are related to one-another and the direction of relationships, when the value of the correlation coefficient lies around ± 1 (+ shows positive relation and – shows negative relation), then it is the perfect degree of association between two variables. Whereas, relationship between two variables will become weak if the correlation coefficient value goes towards 0. Evans (1996) suggests describe the strength of the correlation and suggests for the absolute value of $r$. (where the value depicts 0.00-0.19 is very weak correlation; 0.20-0.39 weak correlation; 0.40-0.59 moderate correlation, 0.60-0.79 strong correlation and 0.80-1.0 very strong correlation).

3.9.4 Regression

Regression is a statistical measure which determines the strength of the relationship between independent variables (a series of changing variables) and dependent variable.

3.10 Limitation of Study

- Only one university from each institutional category was selected
- The present study is confined to the Universities of the state of Uttar-Pradesh, India
• The study may have been influenced by the knowledge limitation of the researcher and the target respondents.

At the end, the researcher summarises as Descriptive research design were used for the data analysis. The sample was selected using cluster sampling. The respondents constituted of students of Under-Graduation and Post-Graduation, Doctoral research and Alumni. Data was collected using self-structured questionnaire. The answers were recorded on a five point Likert scale. The data were collected using print questionnaire and through the online platform. The data were analyzed by using various statistical tools.