Chapter III
Research Methodology

The last chapter provided the backdrop for addressing the research problems regarding the nature of social and educational experiences of students with disabilities in higher education institutions. Higher education was identified as a useful tool for development in this context. Given the broad nature of the research problem, any attempt at dealing with it would require the delineation of relevant issues, exploring which would help in addressing the research problem. With this aim, the present chapter begins with the rationale of the study and identifying the objectives of the study. This is followed by details about the procedure adopted for collecting and analyzing data. The chapter concludes by outlining the organization of the thesis.

3.1. Rationale of the Study

During the last three decades, there has been a movement from segregated education through integration to a point where inclusive education is central to education of children and youth with special needs (Hegarty, 2001). Several recent United Nations polices have proclaimed that the rights of all persons are to be valued equally and provided with equal educational opportunities in mainstream institutions (Avramidis, Bayliss, and Burden (2000). It includes the UN Convention on the Rights of the Child (1989), the UN Standard Rules for the Equalization of Opportunities for Persons with Disabilities (1993), and the UNESCO Salamanca Statement (1994).

Since there has been a growing concern providing inclusive education to children and youth with disabilities in many countries all over the world, the movement to guarantee equal educational opportunities for such students in India has also gained momentum. The importance of education for children with special needs in India has been brought into a sharper focus when several national and international Acts, namely, the Integrated Education for the Disabled Child (IEDC), 1974; National Policy on
Education (NPE), 1986; UN World Declaration on Education for All (EFA), 1990; the Declaration on the Full Participation and Equality of People with Disabilities in the Asia Pacific Region, Persons with Disabilities Act, 1995; and National Policy for Persons with Disabilities, 2005.

All these policies have brought about significant changes in the provision of more educational opportunities to children with disabilities in regular schools as well as rise in the number of enrollment of students with disabilities in higher education institutions. In order to assist these students, the University Grants Commission has already attempted to facilitate better accessibility of higher education to achieve better results by giving special grants. But not all the universities have taken the initiative or responsibility to create an enabling environment for students with disabilities. The reasons are: lack of coordination within the university management, inadequate financial support, and ignorance about the policies and needs of students with disabilities. As a result, many of the students with disabilities are facing many problems in receiving higher education. In some universities, though funds are available, the facilities are not up to the mark. The UGC has so far identified and approved 54 Universities and colleges under the HEPSN scheme for making friendly accessible environment for students with disabilities within their campus (See Annual Report, 2006-07).

Further review of literature shows that a majority of students with disabilities indicated that they had encountered barriers to their education, including lack of understanding and cooperation from administrators, faculty, staff and other students; lack of adaptive aids and other accommodations; and inaccessibility of buildings and grounds (West et al (1993) and Adrianne (2006). Apart from mandatory provisions, students with disabilities need positive socio-cultural, economic and infrastructural conditions within the educational institutions. The Persons with Disabilities Act, 1995, has stated that higher education institutions must make provisions so that disabled persons would have access to education at all levels. According to University Grants Commission (UGC), 6 per cent of youth population is enrolled in Indian universities and colleges.
Approximately, based on the most conservative estimate for the disabled youth population in India, at least 3160,000 disabled youth should be in the Indian universities and colleges. However, just 1.2 per cent of the 3.6 lakh disabled youth are in the universities and colleges. It can be concluded that India’s higher educational system is not accessible to 98.8 per cent of its disabled youth.

To summarize, the rationale of the present PhD study is based upon the following issues:

a) There is rise in the enrolment number of students with disabilities in higher education institutions.

b) The researcher could hardly find relevant (only two found) studies on this subject from the Indian context. Thus this study will throw more light to our understanding of the situation in the Indian context.

c) The present study is an attempt to explore the problem of students with disabilities, their experiences, and also to propose implications to their problem.

d) Finally, the policy makers can use this study to develop government policies that promote better institutional services and facilities to assist students with disabilities in higher education, especially at university level. Until and unless the concerns of disabled people are included in mainstream educational policies, along with weaker sections of society, India will not be able to achieve overall educational development goals and become a knowledge society.

It is in this context that the present study has attempted to examine polices and support services for students with disabilities in higher education institutions. It is also important to explore the social and educational experiences of students with disability about the availability of support services. Similarly, attitudes of teachers and students and their experiences with students with disabilities at higher education have also been examined.
3.2. Research questions

1) How far are the higher education institutions in Andhra Pradesh aware of the policies and schemes which have been introduced by Government of India and UGC for students with disabilities?
2) What are the policies implemented by higher education institutions for supporting students with disabilities?
3) What are the factors assisting and hindering the universities in supporting and accommodating students with disabilities?
4) What are the factors which promote or hinder the process of social and educational advancement of students with disabilities at higher educational levels?
5) What are the barriers encountered by these students in higher education institutions?
6) What kind of strategies are the students using to cope their experiences in higher education institutions?
7) What are the factors affecting the attitudes of teachers and peers towards students with disabilities in the general educational setting at higher education level?

3.3. Objectives of the Study

1) To study the provision of support services to students with disabilities in higher education institutions in Andhra Pradesh
2) To explore the positive and negative, social and educational experiences of students with disabilities in higher education at the university level
3) To study the perceptions of teachers and peers in terms of their awareness of the special needs of and experiences with students with disabilities and their attitudes towards them
4) To draw out the favourable and hindering factors in the process of creation of an inclusive environment in higher education institutions.
3.4. Theoretical Framework Guiding the Conceptual Framework

The conceptual framework for understanding social and educational experiences of students with disabilities in higher education institutions is shaped by a number of theoretical perspectives. The main perspective guiding the study is as follows:

**Capability Approach**

In the introduction chapter, how disability is constructed and understood from different theoretical perspectives in various academic disciplines has been discussed. Out of these perspectives, the researcher believes that the capability approach has the potential to be a comprehensive framework of thought on issues and conditions which are related to students with disabilities in higher education by its provision of various useful implications. The capability approach offers an alternative space for social justice evaluation related to the notions of capabilities and freedom of choice. It argues that evaluation of well-being, poverty, inequality and justice, and the design of social policies and institutions should focus mainly on the individual’s capabilities to function. The different components of the capability approach and the role that resources play within it are represented schematically in Figure 3.1.

According to Sen,

“A functioning is an achievement, whereas a capability is the ability to achieve. Functioning’s are, in a sense, more directly related to living conditions, since they are different aspects of living conditions. Capabilities, in contrast, are notions of freedom, in the positive sense: what real opportunities you have regarding the life you may lead” (Sen, 1987: 36).

The application of capability approach to the study makes a clear distinction between means, functioning and capabilities, indicating that capabilities are the real space of concern for social justice (Nussbaum, 2000; Sen 1992). The means are composed of resources and endowments which are helpful to the achievement of additional ends. It
includes individual resources such as education, health, income, and collective resources such as healthcare, public infrastructure and the education system etc. People use these inputs influence in order to achieve fundamentally valuable ends, understood as functioning’s such as ‘beings’ and ‘doings’ (Roche, 2009). However, the conversion of these inputs into functioning is affected by individual (physical condition, gender, reading skills), social (public policies, social or religious norms, gender roles, societal hierarchies, power relations) and environmental factors (climate, infrastructure, institutions, public goods).

The capability set is represented by the potential set of functionings from which people can choose one particular set in relation to their availability of resources and conversion factors. This is the real opportunity set available to the people from which they can choose. Based on their priorities and requirements, people choose a particular set of functioning, which is considered to embrace a particular way of life. The outcome is that a person enjoys the actual set of achieved functioning, which, in turn, include different ‘beings’ and ‘doings’, from educational attainment to self-respect. The underlying characteristic of this approach is making a choice at any given time which obviously influences a person’s set of opportunities in future. Despite paying attention to inputs and outcomes, this approach considers that for evaluation purposes; the focus should be on actual capabilities and substantive freedoms (Roche, 2009). This is in accordance with the true sense of ‘entitlements’: the freedom to achieve within the agency space.

Therefore, to understand the education experiences of these students, it is not enough to know only the availability of services and resources but it is also required to understand them personally and the circumstances in which they live. According to this approach, the functioning of a student with disabilities are the set of things that he/she actually is and does in life, whereas the capability of that student is the alternative combination of functioning what she/he could achieve and from which he could choose. Thus, capability is closely related to the idea of opportunity. The key difference of the
capability approach from the human rights and the ICF is that it reflects other personal characteristics rather than impairments in its analysis. In addition, it considers resources as an important factor resulting in the actual potential and opportunity of disabled people (Mitra, 2003).

Another important feature of this approach is that it aims at the potential of a person to realize a variety of functioning or aspirations as opposed to expectations foisted upon them by society. This is against Nussbaum’s capability approach in which she developed a list of capabilities. Although the revision of ICIDH2 has been developed to understand disability, it cannot reflect other social and environmental factors and issues in its framework (Ustun et al, 2003). Similarly, the Human Rights Based Approach was also criticized mainly because it paid little attention to the social background, political and historical conditions of the disabled people and other deprived sections (Batliwala, 2007). But, on the other hand, the capability approach is able to reflect all these factors in single framework.
Means to Achieve

Source: adapted from Robeyns, 2005: 98

Figure: 3.1. Capability Approach
Using Capability Approach for Conceptual Framework of the Study

The present study derives the theoretical concepts drawn from the capability approach. In this approach, as shown in Figure 3.1, the concepts of functioning and capabilities allow for a comprehensive understanding of the entire spectrum of educational and social experiences of students with disabilities. By using capability approach for this study, the situation of students with disabilities is better understood with the combination of various factors. These factors include:

1) The nature of students’ impairment and their other personal characteristics, for example, age, gender, educational and occupational aspirations, self-determination and advocacy skills, etc.
2) The availability of support services including academic, financial, etc., and
3) The social and environment factors.

For instance, if a student with visual impairment is provided with assistive devices (commodity) but she/he does not know how to use these devices (personal factors), or, if the academic buildings or computer centers are not accessible or the university administration holds a negative attitude or are not aware of the special needs of these students (social and environment factors), the functioning of these students in higher education may not achieved.

These students in higher education institutions face various challenges and barriers not only in relation to impairment, but also with reference to other issues just as their students do. Challenges related to impairment may not be necessarily be major problems to them. Other issues such as discrimination, lack of self advocacy skills due to one's poverty, ethnicity, gender or social and economic background may have more impact on the person. Regardless of impairments, these students are not free from the cultures and the environment of their higher education institutions as factors such as policies, support services; social and environment restrictions play a significant role.

The conceptual framework guiding this study has been illustrated in Figure 3.2. The framework has been derived from theoretical perspective, literature review, and
depicts the lines of enquiry for this research. Despite the existence of many policy provisions for students with disabilities, the students have been facing problems in receiving higher education. In order to understand what are the favourable and hindering factors affecting the educational experiences of these students in higher education institutions, the researcher collected data from different stakeholders including teachers, students, and university management. The characteristics of these stakeholders influence the educational experiences of these students directly or indirectly. If the favourable factors are less than the hindering factors, it leads to a negative experience and vice-versa. Based on their experiences, as well as the perceptions of the other stakeholders, the researcher will draw out the favourable and the hindering factors which influence the creation of inclusive environment in higher education institutions. The framework below helps to understand the positive and negative factors as perceived by the different stakeholders, which enable the students with disabilities to have better educational experiences.

Students with disabilities are the main stakeholder in this study. The characteristics of students themselves would affect their educational experiences. An attempt is made here to present some aspects of their academic life. The study also inquires into the reasons for their interest in higher education, and the reasons of choosing a particular course. Achieving success in higher education institutions for students with disabilities not only requires an ability to manage academic challenges but also administer challenges faced by their impairment. To manage the academic and social demands of higher education at the university level, students need to understand their disabilities, develop effective coping strategies to manage them, accept their own strengths and limitations, be aware about the policies and facilities available as also the procedures to access them when needed, and support services available on and off the campus.

Similarly, the characteristics of teachers and students also have an impact on the educational experiences of students with disabilities to a large extent. Research studies conducted by Wilczenski, (1995); Wolman et al, (2004); Kraska (2003); and Taggart and
Mcmulln (2007) suggest that knowledge, assumptions, beliefs and attitudes of teachers influence their teaching practices, and their interaction with students with disabilities, in turn, influences the educational experiences of these students. There have been hardly any studies which have focused on the attitudes and experiences of students towards students with disabilities in higher education institutions in the Indian context.

Another important stakeholder of this study is the university. Each university has its own specific characteristics, which include awareness of the needs of these students and their commitment to provision of support services, financial resources, and establishment of the disability cell and also appointment of a coordinator for the cell. The primary challenge faced by higher education institutions at present is to actively put procedures in place for facilitating the admission of students with disabilities who have historically been marginalised at this level as also providing them with opportunities to receive the education and training required to enter a variety of job markets. Alongside this is the challenge to develop the capacity of the institution to address special needs and barriers to learning and development. This includes not only learners with disabilities, but also all learners. This requires that adequate enabling mechanisms be put in place to ensure that appropriate curriculum and institutional transformation occurs, and that additional supports are provided where needed.

An exploratory study by Riddell, Tinklin and Wilson (2004) shows that access to higher education by disabled students is part of policy statements related to a number of areas including admissions, estates and buildings and also in some strategic plans. However, student case studies have revealed gaps between policy and practice and have showed that significant barriers, which hinder the participation of disabled students in higher education, remain. Wilson concluded that support for individual students have remained largely within the province of student support services, with an emphasis on providing these students support to get round institutional barriers rather than on more fundamental institutional changes to create enabling environments. The conceptual framework, in conjunction with the study objectives, guided the methodological considerations of this research. Elaborated further is the research design of the study.
Students with Disabilities (SWDs) at Higher Educational Institutions (HEIs) in A. P

Characteristics of SWD’s
- Type & severity of disability
- Socio-economic background
- Gender, Stigma, attitudes, Occupation
- Special Needs
- Special accessibility & arrangement (Exams & scribes, special evaluation)

Characteristics of HEI’s
- Providing facilities
- Disability Units/cells
- Implementation of policies & Action plans

Characteristics of teachers
- Providing learning resources
- Awareness of special needs
- Attitudes, Cooperation

Characteristics of fellow students
- Interaction, Participation
- Relations, Social networks

Favorable factors
- Disability cells
- Learning Resources
- Support services
- Positive attitudes & relationships
- Academic support
- Self-advocacy
- Extra-curricular activities

Positive experience
- Easy accessibility
- Academic advancements
- Independent life (with com. Assistance)
- Social exposure

Hindering factors
- No support from Administration
- Severity of disability
- Lack of friendly environment & accessibility
- Financial & learning resources
- Negative attitudes
- Lack of training (computers, software’s)
- Implementing policies

Negative experiences
- Facing problems in accessing facilities (Buildings, library, toilets)
- Dependent life (On friends), under utilization of resources (Scholarships, reader allowances) and funds

Outcome
- Policies & facilities for meeting the Higher Educational Needs of Students with Disabilities
3.4. Research Design

A research design is the plan, the structure, and strategy of investigation to obtain answers to the research questions—the plan is the overall scheme or programme of research (Baker, 1994). The present study is exploratory in nature. To answer the research questions posed in this study, the researcher used a mixed method approach which is a procedure for collecting, analysing and mixing or integrating both quantitative and qualitative data at different stages of the research process within a single study (Creswell et al., 2003). The combination of the two methods provides the researcher with multiple ways of looking at a complex problem. On one hand, the quantitative method allows for deductive thinking, scientific testing of hypothesis, standardised data collection from a large number of respondents and statistical analysis. On the other hand, the qualitative method puts emphasis on inductive thinking, an exploration of complex issues in depth and breadth, building of models and theory, using descriptive materials from different types of data (e.g. in-depth interviews and focus groups) and analysis (Johnson and Onwuegbuzie, 2004).

The main rationale for mixing both types of data in the present study was that neither quantitative nor qualitative methods are sufficient by themselves to capture the trends and details of situations such as the factors which facilitate or hinder the educational advancement of students with disabilities in higher educational institutions in Andhra Pradesh. Quantitative and qualitative methods complement each other and provide a more complete picture of the research problem (Tashakkori and Teddlie, 1998). Mixed methods provide a more complete picture of the research problem. When used in combination, quantitative and qualitative methods, multiple methods, or triangulation, reflect an attempt to secure an in-depth understanding of the phenomenon. Triangulation is not a tool or a strategy of validation, but is an alternative to validation (Fielding and Fielding, 1986). Using multiple methods, empirical findings, perspectives and observers in a single study is best understood as a strategy that adds breadth and depth to any investigation (Flick, 1992).
Area of the study

The State of Andhra Pradesh located in the Southern part of India is spread over 2.78 lakh sq.kms and has 23 districts, 1100 Mandals and 25,000 Villages. It is the fifth largest area wise as well as fifth most populous State in India. It has abundant natural resources and a large mineral base. The state, with a population of over 7.55 crore, has a literacy rate of over 61 per cent. It is termed the ‘Rice Bowl’ of India, with 65 per cent of the workers working in the agricultural sector. It has over 2.3 million enterprises, employing over 6.4 million employees across the state (Directorate of Economic and Statistics, 1999). The service sector in the state accounts for nearly 43 per cent of Gross State Domestic Product (GSDP) and employs 20 per cent of the workforce.

As per census 2001, over 21 million people in India suffer from one or the other kind of disability. This is equivalent to 2.1 per cent of the total population. Among the major states of India, the prevalence of disability (percentage of persons with disabilities in total population) is quite low in Andhra Pradesh (1.8%). The number of males with disabilities was higher than that of females with disabilities in any state in general, except Tamil Nadu.
Andhra Pradesh is a much sought after destination for higher education in India. The state offers quality education to all students within the state and other parts of India. Andhra Pradesh has the higher number of academic institutions in India in terms of higher education and also enrolment. At present, it has a total number of 35 universities; of which three of them are central universities and 27 of them are state universities, and 5 are deemed universities. The arrow marks in Figure 3.4 shows the areas where the data was collected for this study.
3.5. Data Source and Methods

Table 3.1 illustrates the configured data sources and methods for major research questions. The Table was prepared by analysing each research question against a myriad of available research methods. For this study, data was collected by using both qualitative and quantitative techniques such as survey method, in-depth interviews and Focus Group Discussions. The aim of the survey method in this study was to examine the provision of support services to students with disabilities in higher education institutions in Andhra Pradesh. The researcher sent questionnaires to university Registrars and Dean of Students Welfare with a request that these should be filled in by a senior member of the management, with assistance from a specialist disability officer, if necessary. The first section of the questionnaire focused on awareness about the policies and its implementation. The second section focused on provision of support services to students with disabilities. The final section focused on the facilitating and hindering factors affecting higher education institutions to support students with disabilities.

Similarly, in-depth-interviews were also conducted with students with disabilities and teachers. The interviews were conducted with the help of semi-structured in-depth interview schedules. In-depth interviewing is a technique which enables the researcher to capture the complexity of individual feelings, thoughts and perceptions. Exploring the respondent’s worlds through in-depth interviews gives voice to their in-depth experiences, providing entry into cultures beyond our own (Thayer, 2001). It also provides an in-depth and systematic way of looking at events and helps in understanding of causality and provides a sound base for extensive exploration in future research. The first section here presents the personal profile of the respondents, and their family and educational backgrounds. The second section discusses their experiences about being a part of the university system, the barriers they have encountered and the support services provided to them by the university. The third section analyses the manner in which these students manage their life at the university.
Similarly, the researcher also collected data from teachers by interviewing them. The semi-structured interview schedule was designed to investigate teachers’ attitudes and experiences of teaching students with visual impairments in higher education. The interview schedule consists of five parts. The first part of the interview schedule consists of some demographic questions such as age, gender, academic status, and teaching experience. In the second part of the schedule, there were five statements to examine teacher’s attitudes, which included both positive and negative statements. Three of the statements (1, 2, and 3) were negatively worded. The rating scale was measured as follows: Strongly Disagree – 1, Disagree – 2, Uncertain – 3, Agree – 4, and Strongly Agree – 5.

In the third part of the schedule, there were some questions on teaching strategies and support services provided to students with visual impairment. In the fourth part of the schedule, questions were based on teachers’ perceived facilitating and hindering factors for successfully teaching students with visual impairments in general education at university level. In the last part, the teachers were asked to report what were the important factors that assisted or improved the educational experiences of students with disabilities in higher education.

The other method employed was focus group discussions with students or students without disabilities. A focus group is a form of qualitative research in which a group of people are asked about their attitude towards a product, service, concept, advertisement, idea, or packaging. The researcher used discussion guide to collect the data. The purpose of the discussion guide in a focus group discussion is to provide a framework for the moderator to ask and probe questions. The discussion guide in this study consisted of four sections. The first section gave basic information to understand participants’ interaction and experiences with students with disabilities at selected higher education institutions. The second section focused on students’ attitudes and their awareness about the needs, problems and availability of support services for students with disabilities in their respective universities. The third section focused on the challenges perceived by the
students to students with disabilities. The final section focused on suggestions of the students to improve educational experiences of students with disabilities in a university set up. The observation method was used too. Observations which were noted down were those on physical environment in the campuses such as the hostel and academic buildings, the library, recreation and sports centers, arrangement of classes, kind of support services provided to students with disabilities like learning resources, transport services.

### Table: 3.1 Data Sources and Methods

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources and methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How far are the universities aware of the policies for SWDs and providing support services for them?</td>
<td>1) Survey with university registrars or Deans of students welfare or disability co-coordinator using questionnaire.</td>
</tr>
<tr>
<td>2) What are the factors which promote or hinder the process of social and educational advancement of SWDs at the university level?</td>
<td>2) Semi-structured interviews with students with disabilities from three universities</td>
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<tr>
<td>3) What are the barriers encountered by students with disabilities in higher education institutions?</td>
<td>3) Semi-structured interviews with SWDs from three universities</td>
</tr>
<tr>
<td>4) What are the attitudes and experiences of teachers towards teaching students with visual impairments at the university level?</td>
<td>4) Semi-structured interviews with faculty from three universities</td>
</tr>
<tr>
<td>5) What are the attitudes and experiences of students towards the SWDs in higher education at university level?</td>
<td>5) Focus group discussions were conducted with students or students without disabilities.</td>
</tr>
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</table>

#### 3.5. Sampling Strategy

For conducting the survey, to select the universities, the researcher used purposive sampling. The criteria for selecting the universities were based on inclusion and exclusion criterion. For example, well established universities which have been
established before the year 2003 as well as those universities offering courses on higher education that is MA, M.Phil, and PhD courses were included. The rationale for not choosing students from Medical/Engineering/ Technical/Professional courses in this study are as follows:

1. The difficulties, the needed infrastructure and the needs and requirements of students from Medical/Engineering/Technology/Professional courses are different from those who are under consideration in the study due to the given peculiar nature of their courses and practical assignments.

2. These students of Medical/Engineering/Technical/Professional courses are placed with outside organisations for their field and practical training throughout their course work and to study the available facilitating infrastructure for students with disabilities at those organizations is beyond the scope of the study.

3. Since the researcher is not from Med/Eng/Tech/professional background, he would not be in a position to relate with the specifics problems/ needs/requirements of these Students.

A second criterion was that those universities which have not completed a minimum of five years after establishment and which did not offer courses in higher education were excluded. On the basis of inclusion and exclusion criterion, the researcher selected and sent questionnaires to 10 universities out of the 35 universities. After putting so much effort, the researcher got response from only 6 universities. Out of these six universities, two were central universities and the remaining four were State universities. These six universities are scattered in different parts of Andhra Pradesh.

For selecting the sample of students with disabilities, teachers and students, all universities of Andhra Pradesh were stratified region wise into three classes’. Andhra Pradesh consists of three regions, namely, Andhra (also known Coastal Andhra), Rayalaseema and Telengana. Each region varies from the other region socio-economically. The researcher stratified the universities region wise and hence prepared a
list of universities each region wise. The researcher then selected one university from each region list by using purposive sampling. The respondent universities were purposely sampled in an effort to gain maximum variation. With diverse variations the researcher selected three universities. The characteristics of these three universities are diverse as follows:

a) These are located in three different regions (Andhra, Rayalaseema and Telangana)

b) One is a Central and the rest two are State universities. The State universities have been named as State University (a) and State University (b).

c) Central and State University (a) both have a disability cell as well as a coordinator, to look after the needs of students with disabilities in their respective universities, whereas State University (b) has neither a disability cell nor any disability coordinator.

In the second phase, after selecting the universities the researcher collected data from all students with disabilities from each university by using snowball sampling. Snow ball sampling – also known as chain referral sampling – is considered a type of purposive sampling. It was very difficult to get details about students with disabilities from the university management or disability office due to lack of data base regarding the number of students with disabilities enrolled. That is why the researcher used snow ball sampling. In this method, the students with disabilities with whom contact had already been made used their social networks to refer the researcher to other students who could potentially participate in or contribute to the study. In all 100 students were included in this study (48 from Central University and 26 from each of the two State Universities respectively).

After finishing interviews with students with disabilities, the researcher collected data from the teachers by using both purposive and random sampling. First, the researcher collected information regarding the teachers those who are teaching students with only visual impairments at the time of collecting data from students. As the needs of
students with visual impairments are diverse, teaching strategies and support services
needed by them in order to continue their studies successfully was compared with those
needed by orthopaedically impaired students. Secondly, the researcher selected teachers
who teach students with visual impairments in School of Humanities, Social Sciences,
and Management. Since science is sometimes abstract, it is often difficult for the teacher
to teach and for the students to study, and science teaching depends mostly on visual
instruction; the researcher could not get students with visual impairments enrolled in
science departments or subjects. Whether it is science or arts or humanities, it is always
problematic for students, as well as teachers. In order to understand the teachers’
problems and perceptions, the researcher attempted to investigate and gain insight into
the kind of teaching strategies used and services provided in order to assist students with
visual impairments. After preparing the list of teachers from the three universities, the
researcher selected 50 teachers (26 from Central University and 13 from each of the two
State Universities) with the help of random sampling.

The researcher also used focus group discussions to collect data from students or
students without disabilities. For conducting focus group discussions, the researcher used
purposive sampling to select the students from three universities. The criteria for
selecting the students were based on whether they study with students with disabilities in
the current academic year in their respective universities. In all, six focus group
discussions were held to collect data from students (Two FGDs from each university).
Each focus group consisted of five to seven peers.

**Data Collection**

Data was gathered through survey, in-depth interviewing, focus group discussions, and
observation guided by the research objectives. The data was collected in two phases
between Feb 2009 and Dec 2010. In the first phase, the researcher sent questionnaires to
the Registrars and Dean of Students Welfare of ten universities, which had been selected
on the basis of inclusion and exclusion criterion, with a request that these be filled by a
senior member of the management, with assistance from a specialist disability officer, if necessary. But the researcher got response from only two universities. Therefore, the researcher himself went to the remaining universities and got response from another four more universities (total six (2+4)).

In the second phase, the researcher collected data from three universities based on the above-mentioned sampling strategy. The researcher also collected data from students with disabilities from each university. Except for the Central University, none of the state universities had databases regarding the enrolment of number of students with disabilities every year along with the total number, SCs and STs. At the Central University, the researcher got the list of students enrolled in the various course. Thus, it was easy for the researcher to meet respondents at their departments and to fix appointment for the interviews. But in both State universities, the researcher had to use snowball sampling to collect the data for this study. Hundred interviews were conducted from three universities in three different regions in Andhra Pradesh. The interviews with students with disabilities normally lasted for one and half to two hours. Most of the interviews were conducted at student hostels, although a few were done in the rooms of the student’s department and play ground.

While collecting data from students with disabilities, the researcher also collected information regarding teachers and students. The researcher collected data from 50 teachers by using purposive and random sampling from three universities. The interviews with teachers normally lasted for forty five minutes to one hour. All the interviews were carried out at their offices. The interviews were conducted with the help of semi-structured schedules (See Appendixes).

As stated earlier for this study, the researcher collected data from three universities. At each university two focus group discussions were conducted. Each group consisted of five to seven members. To get the diverse results, the researcher collected data from two categories of respondents by using purposive and random sampling. By
using purposive sampling, the researcher selected respondents for the first category which is presented here as Friends category such as Groups 1, 3, and 5. The main criteria for selecting the respondents for this category were that those students must be roommates or close friends of peers with disabilities at each university. Further, by using random sampling, the researcher selected the respondents for the second category which is presented here as Classmates category such as Groups 2, 4 and 6. For this category, the researcher selected students randomly from the same class of peers with disabilities at each university. The sample of respondents for the focus groups comprised of 39 students selected from the three universities. Of the 39 respondents, 15 (Group1= 8 + Group2= 7) were from Central University; 11 (Group3 = 5 + Group4 = 6) were from State University (a). The remaining 13 (Group5 = 6 + Group6 = 7) respondents were from State University (b). There were 14 (36%) females and 25 (64%) males. All focus group discussions were audio-recorded. The focus groups were set up in a discussion mode to facilitate dialogue and conversation among the respondents. Each group discussion was for approximately 30 minutes. All the FGDs were conducted in the student’s classrooms in the evening after the classes. Considerable time was spent on rapport building to make the respondents feel active and friendly. A tape recorder was used to record the FGDs after obtaining their consent.

The researcher first explained the importance of the study to the University management and only after taking their permission, data was collected. Before each interview, the purpose of the study was explained to the prospective respondent. It was also made clear to all respondents that they could withdraw if they were not comfortable. This process was followed before interviewing students with disabilities, students and teachers. The interviews were conducted mostly in Telugu with a few in English depending on the understanding level of the respondents. Those conducted in Telugu were later translated into English by the researcher. Utmost care was taken to make the entire process as transparent and open as possible for all the respondents in this study.
3.7. Operational Definitions of Key Concepts

Operational definition of key concepts means that terms must be defined by the steps or operations used to measure them. Such a procedure is necessary to eliminate confusion in meaning and communication (Burns, 2000). The concepts are:

1. **Awareness of special needs**: In this study, awareness regarding students with disabilities includes understanding of the policies, special needs and problems to enable them to have better educational experiences and any other information in relation to students with disabilities.

2. **Attitude**: In the present study, attitude is defined in terms of positive or negative views and response of the teachers, students, towards students with disabilities.

3. **Disclosure**: In the current study, disclosure means giving information to the researcher, the communication of information about disability by students with concerned authorities, staff and students in higher education institutions.

4. **Social relations and life**: In this study, the relations these students have among themselves within and outside the education institutions, including those with family, peers without disabilities, teachers and staff.

5. **Social support**: Social support is the support that is received from family, friends, and significant others in the individual’s life, in order to deal with the effects of stressful event.

6. **Self-advocacy**: Self-advocacy is when students with disabilities take the responsibility for their educational experiences and for their impairments, learn about any available support services and discuss their needs and issues with concerned people, including university authorities, teachers and non-teaching staff.

7. **Support services**: In this study, several kinds of support services are discussed which are intended to help the students with disabilities to improve their learning experiences in higher education institutions. These support services include physical, academic and financial support services.
8. **Assistive Technology:** Assistive technologies in this study are those ones available to the students which would help them to maximise their ability to effectively complete the course requirements. Some of the adaptive resources and services include adaptive computers, tape recorders, sound amplification systems, television enlarges, voice synthesizers, calculators or keyboards with large buttons, switches and technology assessments and evaluations.

9. **Transport services:** This service provides accessible university transportation to students with disabilities through the university disability office.

10. **Social experiences:** In this study, the researcher has attempted to understand the factors which have contributed to positive and negative social experiences for students with disabilities studying at the university. Keeping in mind the variety of social contexts, these students were asked about (a) friendships and relationships with other students, (b) Social support from family (c) their perceptions about their relations with teachers, students at higher education, and (d) their participation in extra-curricular/Social activities. The researcher believes that these five factors influence the social experiences of these students and help them to become socially integrated in the campus.

11. **Educational experiences:** Educational experiences reflect their experiences while pursuing higher education with or without the availability of support services including classroom physical accessibility, assistive technology, financial and attitudes. It also includes their learning experiences inside or out of the classrooms.

### 3.8. Data Analysis

Data analysis is the process of making a proper meaning and interpretation of what the respondents have said and what the researcher has seen and heard (Green, Caracelli and Graham, 1989). This process of analysing data is unique to the researcher and there is no particular format by the researcher as to how it is to be done (Patton, 2002). In this study, the quantitative data were coded and entered into the Statistical Package for Social Sciences (SPSS) 17 for statistical analysis. Descriptive statistics, such as means, standard
deviations, and percentages, were calculated to describe demographic information of the respondents. Further, chi-square analysis were used at the p < 0.05 level to clarify the significance of the differences on means. In analysing the qualitative data in this study, the researcher was guided by the phases of thematic analysis (Braun and Clarke, 2006). This analysis helped the researcher to familiarise himself with the data – by means of reading and re-reading the data and then noting down initial ideas. The next step was to generate initial codes. A code-book, which included a detailed description of each code, inclusion and exclusion criteria, and in most cases quotes of real text for each theme, was maintained and used actively. During the process of analysis, the main themes which emerged coincided with the earlier conceptualisation.

3.9. Limitations of the Study

The study captures information from different stakeholders to determine the factors affecting the educational experiences of students with disabilities in higher education institutions in Andhra Pradesh. The researcher collected data from three different universities which have diverse characteristics. The nature of these universities may have influenced the findings. These universities have taken the initiative to provide equal educational opportunities for all their students, including students with disabilities. Their acceptance and provision of support services may also have affected these findings. Similarly, the characteristics of others stakeholders may also have affected the findings because other than policies and support services students requires self advocacy skills, social life and emotional and social support from teachers and students. Therefore, the results of the study are not intended to be generalised for other higher education institutions.

In addition, several limitations must be considered when reviewing the results of the study. These are:

1. Ideally, it would have been appropriate to study a sample covering all the universities and different types of students with disabilities in Andhra Pradesh. However, considering the time, monetary constraints, and non-availability of
different types of students with disabilities other than orthopedically and visually impaired students to carry out a complete enumeration of all such students and then collecting data from other stakeholders, there would have been a problem of delimitation and hence the universe has to be restricted to three universities.

2. Several factors, beside student demographic data, availability of support services, teachers and students attitudes, influence the outcome of these students in higher education. These factors include cultural, psychological and social aspects. In this study, the researcher touched the social aspects such as a student’s social life and relations, participation in social activities, their own attitudes and other people attitudes towards them. But there is still need to focus on issues such as gender, body structure, stigma, cultural, and psychological aspects. The intention of the whole study is to explore the availability of support services and its impact on social and educational experiences of the students. Similarly, there is need to understand how the characteristics other stakeholders in the study impact the educational experiences of these students in higher education institutions.

3.10. Conclusion

This chapter presented the methodology adopted for the study. The research design of the study has been primarily guided by the objective of the research. Support for the design also came for the theoretical perspective guiding the study. Spread over three four phases, the study utilises the qualitative and quantitative methods. The following chapters present the data and the emergent themes.