The university disseminates knowledge through its research and publications.\textsuperscript{1} The process of accumulation of knowledge is a continuous and unending activity of man. Such knowledge helps us to understand the nature and its resources which satisfy human wants.\textsuperscript{2} Research is a phenomenon of exploring new knowledge, identifying new knowledge and verifying old knowledge, which includes invention, discovery and investigation. The quest for research arises whenever there is an unusual occurrence of a phenomenon or there is an unanswered question.\textsuperscript{3} Research may be defined as the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles or theories resulting in prediction and ultimate control of many events that may be consequences or causes of specific activities.\textsuperscript{4} Research is the gateway to the development of theoretical knowledge, practical skills and technical know-how in any discipline. The findings of research generally result in the accumulation of new knowledge, creation of a new product, evolution of new methods, new techniques or processes of production.\textsuperscript{5} Research is the process of systematic and in-depth study or search of any particular topic. “The research that involves scientific analysis would result in the formulation of new theories, the discovery of new techniques, a modification of old concepts or a knocking off an existing theory, concept or technique.”\textsuperscript{6} Research in any area of discipline needs careful, critical and exhaustive investigation to discover new facts which will test a hypothesis, revised and accepted conclusions or contribute positive values to society in general.\textsuperscript{7} The formulation of research is the blueprint of any research work. The blueprint needs the following heads which are essential for any scientific research work, (i) statement of the problem, (ii) review of the related literature, (iii) definition, (iv) delimitation, (v) hypothesis, (vi) sample, (vii) collection of data, (viii) analysis of data, (ix) interpretation of the data, and (x) report writing.\textsuperscript{8} A summary\textsuperscript{9} of some of the characteristics of research may clarify its methodology as:
• Research is directed towards the solution of a problem. It may attempt to answer a question or to determine the relation between two or more variables;
• Research emphasizes the development of generalizations, principles or theories that will be helpful in predicting future occurrences;
• Research is based upon observable experience or empirical evidence;
• Research demands accurate observation and description;
• Research involves gathering new data from primary or first-hand sources or using existing data for a new purpose;
• Research requires expertise. The researcher knows what is already known about the problem and how others have investigated it;
• Research strives to be objective and logical, applying every possible test to validate the procedures employed, the data collected, and the conclusions reached;
• Research is characterized by patient and unhurried activity;
• Research is carefully recorded and reported; and
• Research sometimes requires courage.

**Scientific Research**

Science includes a body of knowledge and a system of procedures. A scientific research, therefore, means an investigation carried on through systematic procedures. Thus, investigation carried on in the field of any science comes under scientific research. In this sense research in social sciences is also scientific.10

According to Kerlinger (1964)11 “scientific research is systematic, controlled, empirical and critical investigation of natural phenomena guided by theory and hypotheses about the presumed relations among such phenomena.”

**Social Research**

In the words of Young (1995)12 “social research is the systematized techniques to discover new facts or verify and test old facts, analyze their sequences, inter-relationships, casual explanations and the natural laws which govern them.”

On the basis of the above definition the following characteristics of social research may be deduced13:
Social research deals with the social phenomena. It studies behaviour of human beings as members of society and their feeling responses, attitudes under different circumstances.

Social research is carried on both for discovering new facts and verification of the old ones.

Social research tries to establish casual connection between various human activities.

Stephenson (1930)\textsuperscript{14} was of the view that social research is manipulation of things, concepts or symbols for the purpose of generalizing to extend correct and verifying knowledge, whether that knowledge aids in the construction of a theory or in the practice of an art.

According to Young (1995)\textsuperscript{15} “the researcher’s primary goal - immediate or distant is to explore and gain an understanding of human behaviour and social life and thereby gain a greater control over them.”

**Subject Matter of Research**

The subject matter of social research is co-extensive with the society itself and any investigation concerning the working of society, its institution forms the part of social research. On the whole, the subject matter of social research may be classified into following three parts\textsuperscript{16}:

- **Fundamental Research**

  This research deals with the fundamental principles of Sociology. It may be conducted either for the verification of some old theory or establishment of a new one and be tested in the light of new situations and necessary modifications be made in it in order to make it more perfect.

- **Applied Research**

  This research deals with the possibilities of application of the result of fundamental research to social problem. It, therefore, deals with social therapy or social engineering which generally takes the form of social surveys. The major difference between an applied and fundamental research is that fundamental research provides the basis upon which the whole super structure of applied research is built up.
• **Quasi-Social Research**
  An applied research, in all the problems, may be termed as quasi-social research such as socio-economic, socio-psychological and socio-anthropological research. The distinction between a pure applied social research and quasi social research is thus dependent upon subject matter and not on the use of tools or fundamental principles.

**Importance of Research in Universities**

The main objectives of a modern university are imparting advanced knowledge to postgraduates in specialized subject fields and providing the required facilities to carry out research activity in different disciplines with an aim to generate new knowledge. The success of their research career mostly depends upon the training they had in universities…. In this respect, university may be considered as birth place for research personnel. It is also one of the sources of location for research activity.

As stated in Radhakrishnan Commission report (1949) “it is for the universities to create knowledge and train minds that would bring together the two, material resources and the human energies.” Under this commission, greater emphasis was laid in the area of postgraduate teaching and research and it recommended that the admission to postgraduate courses should be made on all-India basis and facilities for research be improved. For Ph.D. degree, at least two years’ work and viva voce examination were recommended.

In universities, teaching and research are mutually supporting activities. High quality of teaching in science is possible in research environment. Research is essential for its sustenance.

The quality of doctoral research needs to be maintained in view of the important role it plays not only in shaping the career of each individual scholar, but also to enrich the quality of the research field which is an important part of the entire education system.

**Growth and type of Universities**

There were only three universities, 27 colleges and 5399 students’ enrolment in 1857 while the number rose to 20 universities, 500 colleges and 241,369 students enrolment in the year 1947.
There were 27 universities serving, 174,000 students in the year 1950-51 when the country launched first five years plan. But the pace of growth of development in the field of higher education has been extremely rapid in the last few decades and by the end of 2002-03, there were 16 central and 113 state universities and 15,437 affiliated colleges serving 92,27,833 students. Higher education in India is made up of regular and distance education. There are four types of regular education (General, Technical, Medical and Agricultural) with each type divided in to university and college level. In addition, there are deemed universities or autonomous institutions providing higher education in India.

There were 537 universities, 26000 colleges and 13.5 million students enrolled for higher education in 2010-11. The higher education system in India includes both private and public universities. Public universities are supported by the Government of India and the state governments, while private universities are mostly supported by various bodies and societies. Universities in India are recognized by the University Grants Commission (UGC), which draws its power from the University Grants Commission Act, 1956. The types of the universities include in table 3.1.

<table>
<thead>
<tr>
<th>Types of Institutions</th>
<th>Number of Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Universities</td>
<td>43</td>
</tr>
<tr>
<td>State Universities</td>
<td>285</td>
</tr>
<tr>
<td>Deemed Universities</td>
<td>129</td>
</tr>
<tr>
<td>State Private Universities</td>
<td>106</td>
</tr>
<tr>
<td>Total</td>
<td>563</td>
</tr>
</tbody>
</table>

![Figure 3.1](image.png)

Figure 3.1
Table 3.1 and figure 3.1 show that 43 central universities or union universities have been established by the Act of Parliament. As on 30 November 2011, the UGC lists 285 state universities, 129 deemed universities and 106 private universities.

**Doctorate Degrees Awarded in India**

Subject-wise number of doctorate degrees awarded for the year 2010 and 2011 is depicted in table 3.2.

**Table 3.2**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Number of Doctorate Degrees Awarded</th>
<th>2010</th>
<th>2011</th>
<th>Growth</th>
<th>Growth in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce/Management</td>
<td>231</td>
<td>194</td>
<td>-37</td>
<td>-16.02</td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>163</td>
<td>176</td>
<td>13</td>
<td>7.97</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>150</td>
<td>189</td>
<td>39</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Lib. &amp; Inf. Science</td>
<td>54</td>
<td>45</td>
<td>-9</td>
<td>-16.67</td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>107</td>
<td>145</td>
<td>38</td>
<td>35.51</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>108</td>
<td>90</td>
<td>-18</td>
<td>-16.67</td>
<td></td>
</tr>
<tr>
<td>Sociology</td>
<td>86</td>
<td>77</td>
<td>-9</td>
<td>-10.46</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>899</td>
<td>916</td>
<td>17</td>
<td>1.89</td>
<td></td>
</tr>
</tbody>
</table>


Table 3.2 and figure 3.2 reveal that the highest number of students awarded the doctorate degree are in commerce/business discipline during the year 2010 and 2011 and the lowest number of students awarded the doctorate degree are in library and information science discipline during the year 2010 and 2011 respectively. Further, the highest and the lowest growth in the number of students awarded the doctorate degree are in history and commerce/business discipline respectively.
disciplines respectively. But the percentage growth is high in political science and low in library and information science and psychology disciplines as compared to 2010 and 2011.

**Financial Support to Researchers by UGC**

University Grants Commission (UGC) has been initiating a number of schemes from time to time for the benefit of researchers. The UGC provides a number of fellowships and scholarships to students who pursue higher education in Indian Universities and Colleges in the fields of Humanities and Social Sciences. The details of these fellowships are given as under:

- **Rajiv Gandhi National Fellowship for SC & ST candidates**
  The UGC provides this fellowship to the scheduled caste and scheduled tribe students to pursue their M.Phil. and Ph.D. studies in Science, Humanities, Social Sciences and Engineering & Technology. The expert committee constituted by UGC selects the students for this fellowship. For the five years tenure of fellowship, the selected students are given an amount of Rs.12000/- per month for the first two years and Rs.14000/- per month for the remaining three years.

- **Junior Research Fellowship (JRF) to NET qualified students**
  The UGC conducts NET Examination twice in a year. Junior Research Fellowship is given to those candidates who qualify this test and maintain merit in the list of NET Examination. The selected candidate is given Rs.12000/- per month for the first two years and Rs.14000/- per month for the remaining two years plus one year. The duration of this fellowship is four years but is extendable by one more year to the approval of the Commission. In addition, admissible HRA and departmental assistance of Rs.3000/- per annum are also given to the selected fellows.

- **Junior Research Fellowship (JRF) to Foreign Students**
  A total of 20 foreign students are selected every year under the programme of political and cultural relations of India with other developing countries to undertake advanced studies and research in Sciences, Humanities and Social Sciences leading to M. Phil./ Ph.D. degrees in Indian Universities. In addition to the amount of Rs.12000/- per month for the first two years and Rs.14000/- per month for the remaining two years, annual contingency amount,
departmental assistance and reader allowance are also provided to the selected candidates.

- **Post-doctoral Fellowship for Women**
  This fellowship is given to those unemployed women candidates who hold Ph.D. in the areas of Sciences, Social Sciences and Humanities to pursue advanced research and are not more than 55 years on 1st July on the year of application. The amount of Rs.6000/- per month is given to fresh Ph.D. holders and Rs.8000/- per month to candidates having five years experience after doctorate degree.

- **Post-doctoral Fellowship for SC/ST Candidates**
  This fellowship is given to the selected SC/ST candidates holding Ph.D. in Sciences, Social Sciences and Engineering & Technology faculties. The amount of Rs.16000/- per month with a contingency amount of Rs.30000/- per annum for five years is given to the selected candidates. The upper age limit for this fellowship is 50 years for male candidates and 55 years for female candidates as on 1st July of the year of the application.

- **Dr. S. Radhakrishnan Post-doctoral Fellowship in Humanities and Social Sciences**
  This fellowship is given to the candidates of Humanities and Social Sciences only to carry out advanced research. Two types of fellowships are awarded under this scheme- directly awarded fellowship to Ph.D. holders and bridging fellowship to those candidates who submitted the Ph.D. theses with reduced stipend until the candidates are formally awarded the Ph.D. degree.

- **Maulana Azad National Fellowship for Students from Minority Communities**
  This fellowship is given to the minority candidates who get admission and registration for regular and full time M.Phil./ Ph.D. course in the areas of Science, Social Sciences, Humanities and Commerce in the university. Thirty percent of the total number of fellowship is earmarked on priority for minority girl candidates.

**Research and University libraries**

The mission of university libraries in supporting the process of learning, teaching and research has been widely recognized by different commissions and committees from time to time.29
The University Education Commission (1948-49) headed by Dr. S. Radhakrishnan observed that, “teaching is a co-operative enterprise. Teachers must have the necessary tools for teaching purposes in the shape of libraries and laboratories as also the right type of students. The library is the heart of all the university’s work, directly so, as regards its educational work, which derives its life from research work. Scientific research needs a library as well as laboratories, while for humanistic research, the library is both library and laboratory in one. Training in higher branches of learning and research is mainly a question of learning how to use the tools and if the library tools are not there, how can the student learn to use them? … Both for humanistic and scientific studies, a first class library is essential in a university.”

The library has a great deal in aiding the research which is one of the most important functions of a university. “It functions as a dynamic instrument of education, to feed the intellect of the student, encourages the researches of the faculty and invite all who enter its house to partake fully of its intellectual and cultural fare.”

The needs of academic community and researchers are becoming extremely complex and dynamic. As a result it is important that libraries should develop new strategies and methodology for better administration and operation. Deshpande (1985) puts in the five B’s that is (i) The Bosses- the management, (ii) The Brains behind the library - the library staff, (iii) The Book Collection, (iv) The Building and (v) The Borrowers and browsers are to be integrated defining each one role, duties and responsibilities in achieving the aims of university education particularly research.

While considering research as a basic activity for the advancement of scientific and technical knowledge, the support of library sources and information services may be considered as an essential facility for research work.

Bhatia (1964) observed that research entirely depends upon the adequate provision of availability of the information sources at the right time. In the absence of such adequate information, the research work leads to duplication of work, wasting of time and human potentiality which are very valuable.

In the pursuit of research, social scientists have to use the library for the existing literature, the sources of secondary data and the other databases. It is
libraries, which provide them access to the existing literature, the research
to books and professional journals on the subject of their research...In any case,
the quality and contribution of one’s research will be influenced by one’s
access to the existing literature. Libraries function as an essential integral
component in higher education and research.
SomaRaju stated that the exhaustive and expeditious library and information
support would certainly help scholars in one or more of the following ways:

- In the selection of research topic;
- In the refining or further specification of the research topic already for
  investigation;
- Further classification of points and receiving guidance in the work;
- In obtaining new ideas;
- In using new techniques and methods that have recently developed in the
  field;
- In avoiding unnecessary and unintended duplication of the research work
  already done elsewhere; and
- In supporting or substantiating the research results.

The university library offers various services required by its researcher’s right
from conception and analysis of the topic stage of research to the report
writing stage.

In this context, IT has a distinctive role to play in supporting Ph.D. research
and improving its quality and relevance.

Research is the one of the basic functions of a university and every effort must
be made to achieve excellence. It is the responsibility of university managers
to provide adequate research facilities to its faculty and also help in creating
proper ethos. The nature of research to be encouraged depends upon a number
of factors, including the traditions of the university and the expectations of
society.

Therefore, Indian universities play a major role in generation and
dissemination of knowledge by conducting research works and producing
Ph.D. theses as a unique genre of information source.
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