CHAPTER - 3

Growth and Development of North Maharashtra University
Chapter - 3
GROWTH AND DEVELOPMENT OF NORTH MAHARASHTRA UNIVERSITY

The north Maharashtra University is one of the upcoming universities in India, the university was established on 15th August, 1990 under the Maharashtra University Act No. XXIX of 1989 as a teaching and affiliating University. It actually started its academic and administrative activities under the leadership of Prof. Dr. N. K. Thakare, the founder Vice Chancellor of the university, from academic year 1991-92. The jurisdiction of North Maharashtra University is spread over three districts of North Maharashtra i.e. Jalgaon, Dhule and Nandurbar.

The university was shifted to its own campus in 1995. The university is situated on the banks of river 'Girna' and the campus of the university is spread over a hilly terrain of 650 acres of land. The university is approximately 10 kms away from the Jalgaon city. The pollution free hilly terrain provides natural ambience which creates a perfect environment for study. All Departments are equipped with all modern facilities, required by students / visitors.

The university is imparting education to students, through various courses at under graduate, post graduate, doctoral and post doctoral level, under 09 faculties, which includes science, Engg. & Technology, Education, Medicine and Pharmacy, Ayurvedic Medicine, Arts & fine arts, Commerce and Management, Mental, Moral & Social Sciences, Law faculty.

Right now, there are five schools and six academic departments on the campus. Soon there will be starting new academic department. There are 148 colleges and 34 institutes and 8 recognized R & D centers affiliated to the university and this number is growing every year. The syllabi of different courses are designed to give profound and latest knowledge about the subjects to the students. The element of computer education is also being added to B.A., B. Sc. and B. Com courses. The syllabi of the courses are revised from time to time as per the requirement.

The university has developed a model Examination System and is one of the few Universities in the State for conducting examinations regularly and declaring the
results well in time as Maharashtra Universities Act, 1994. The action plan of the University in this regard is serving as a prototype to other Universities in the State.

To improve the efficiency of work most of the functioning of Administrative Departments / sections is computerized. The modern management techniques are used for easy and user friendly administrative administration.

Prof. Dr. S. F. Patil took over as the second Vice Chancellor of this University of 14th Aug. 1996, during his tenure two new academic departments viz. Department of Comparative Languages and Literature and Department of Information Technology were started on the campus.

Prof. D. R. S. Mali took over as the third Vice Chancellor of the University on 14th August 2001, under his able and visionary leadership University is progressing at a faster pace towards excellence. Besides educational activities Prof. Dr. R. S. Mali is keen on social and environmental problems on the region. He encouraged students and teachers to undertake Water Harvesting programs on the campus, and as a outcome of this, small bands were constructed by the students.

A university is recognized by the quality of research, education imparted by the university and the quality of Software Engineers, IT Professionals, Scientists, Doctors, Business Managers, Law Experts, Educationist and such professionals produced by it. At present the University is offering best quality of theoretical, practical, extension and co-curricular education on the campus and off the campus through university Schools/Departments and affiliated colleges. Educational programs relevant to local, state and National needs through professionally oriented novel syllabi, spirit of unity, value-added knowledge, devotion and commitment has earned a lot of name and fame for this university within a short span of time.

The natural beauty, peaceful & pollution-free environment of the university does encourage the students for thinking, learning & research. Initially different departments started functioning on the campus, some of which were subsequently transformed into schools.

This is the only University in the state of Maharashtra which has successfully utilized School system by bringing interdisciplinary subjects for teaching and research under one roof, thereby reducing the number of faculty, duplication of equipments as it also aims at optimization of human and university resources.

Each school/department is housed in majestic buildings having a perfect blend of modern architecture and cultural heritage. The university hosts 5 schools
and 6 academic Departments, which offer a wide range of courses from academic to professional in Science, Technology, Management & Arts faculty. The syllabi of courses at NMU, are designed to meet the needs of society in 21st century for which more weightage is given to practical/field work and industrial training along with compulsory computer education. This helps students to get better suited to industrial jobs and enter in the field of research and development. Thus, a change in industrial scenario for meaningful employment has changed the methods of teaching and learning.

The students are given several options for degree courses in 9 faculties including a series of PG options and subsequently M.Phil and Ph.D. A student can make a meaningful choice in the light of his own academic strength and potential in the job market upon taking a particular degree/PG course.

The availability of magnificent academic buildings, communication network, necessary collection in the library, modern laboratories, dedicated administrative staff and well qualified team of teachers does built a very strong base for meaningful research and overall development of students at North Maharashtra University.

The unique School System adopted by the North Maharashtra University has helped to develop team spirit in the faculty, which encourages students to undertake individual as well as joint research projects. The Schools/Departments of NMU have well developed research facilities, and have identified their thrust areas of research. Research Scholars are always encouraged to participate in National and International level workshops and conferences so as to develop courage for scientific interaction on public platform.

The post-graduate Schools/Departments offer research program leading to M.Phil. and Ph.D. degrees. The teachers at NMU and their performance have brought number of prestigious honors to the University, thus enhancing NMU’s image in the eyes of authorities from institutes of higher education inside/outside the country. The majority of teachers are operating research projects and guiding M.Phil and Ph.D. students. During the last five years, the teachers have published 150+ research papers, 91 in national and 59 in international journals. The State Government and foreign countries recognized the performance of some teachers, which resulted into awards and recognition like BOYSCAST, DAAD, UNESCO, Jan Tinbergen International Young Statistician Award, and Joulio Curie Memorial Lecture Award etc. received by some of the teachers of NMU.
Another to note that the commitment of the faculty and administration is of highest order, which results into personal research grants to teachers on different projects from different funding agencies. This has enabled equipping Schools/Departmental Laboratories with modern equipments for imparting confidence among the students for analytical techniques and improving the quality of research. Through the individual and team efforts, the University has been successful in bringing Rs.274.34 lakhs worth funding on 78 projects in last ten years from UGC, AICTE, CSIR, DST, ICAR, Third World Academy (Italy), Development Board for the Rest of Maharashtra (DBRM), Mumbai etc.

It is indeed a matter of pride that in a short span of its developmental phase NMU has organized totally 23 national level Seminars/Conferences in different subjects. The University has 5 international research linkages and 7 national linkages too.

Till date University has successfully completed 33 projects at the outlay of 55.61 lakhs and more then 45 projects are under research. There are total 61 students registered for Ph.D. out of which 48 are full time and 23 are working with fellowships. There are two post-doctoral research fellows. During the last 15 years 135 students have been awarded Ph.D. degrees.

Large scale teak plantation program on NMU campus has been conducted to achieve its financial self-reliance in future, through participation of students, administrative staff and faculty of the University. In the monsoon of the year 1999 over 95,000 teak saplings were planted in 100 acres of the University campus. The novelty of this program is that 6 biotech inputs were prepared by the students to examine if they promoted percent survival of plants under scorching heat of Jalgaon. The progress of the project appears bright by virtue of about 96% survival rate, speedily growing green plantlets. Maintenance of plantation is routinely carried out by a group of faculty members, garden section and periodically by N.S.S. It has provided (1) greenery soothing to eyes, especially in summer, (2) conducive atmosphere for thinking, learning and research, (3) an echo-system for the visit of an increased number of birds and rabbits, (4) an opportunity to establish that biotech inputs do work even under adverse conditions and (5) an example of self-help, which no other university and no distinguished vice-chancellor of any of the 264 universities ever considered. It is expected that the teak trees would fetch a substantial money to
the university in 15-20 years. The North Maharashtra University is perhaps the only university to venture into such an ambitious project.

3.1 Central University Library

In a very short period of time the university has gained name and fame on National and International levels. This university has also acquired the prestigious 2(f) and 12(b) recognition from the UGC. The university has been accredited with four star status duly honored by the construction of Central Library building is progressing towards completion, in the meanwhile library is operating from Administration Building. The teaching and research needs are adequately met imaginatively through its dedicated staff. It has sufficient number of text books, reference books and encyclopedias on a verity of subjects. Besides, it provides a spacious reading room and centralized Xeroxing and printing facility to cater official as well as students needs. NMU has a place of pride to be the first University, recipient of INFLIBNET software through auspicious of UGC, made operational in 2000. It too has an internet connectivity, where surfing for desired information can be done.

The Department of Library and Information Science is one of the Department in North Maharashtra University. This Department of Library and Information Science was established on year 2000. The Department of library and Information Science was under consideration of the University to be established as a part of educational program to cater the needs of education in Library and Information Science under the faculty of Mental, Moral and Social Sciences.

The Main Objectives of Department of Library and Information Science

a. To cater the educational needs of professionals.
b. To prepare a manpower to meet the future needs of profession.
c. To improve the professional skills of librarians, information scientists, documentation lists and non-academic institution/organizations.

To search for the excellence in the profession of library, information science and technology.
3.2 Bibliometric Research Methodologies

- Citation Analysis: establishes relationship between authors or their work, between journals between fields, between countries, etc.
- Co-citation coupling: establishes a subject similarity between two documents.
- Bibliographic coupling: links papers that cite the same articles.
- Co-word analysis: analysis of the co-occurrence of keywords.
- Web metrics / cyber metrics: studies the relationship of sites on the web.

Citation Analysis

Citation analysis is the area of Bibliometrics that studies the citations to and from documents. It is a research method that can focus on the documents themselves, on the journals and other publications in which they appear. Simply put, citation analysis can provide a picture of "where the action is" in a discipline. By gathering and analyzing citation statistics, a pattern can be established to reveal who's writing what subjects are popular, which journals and authors are cited most, and by extension, considered the most influential.

The Use of Citation Analysis

i) Citation analysis is a generic term for a set of well-known techniques that have a long history in bibliometric studies of scholarly communication. As artifacts of the scholarly communication process, citations can reveal formal communication patterns. Methods of citation analysis are unobtrusive and can be highly reliable.

ii) Citation-based measures are not the only, or even necessarily the best measures of such impact. Publishers can gain some information regarding use by nothing the number of subscriptions to their journals or by counting the number of times articles are accessed or downloaded from host servers.

iii) Citation analysis assumes that references to a particular journal article reflect a scholarly impact of that article on the author of the citing work. It further assumes that the accumulated total of citations to a given author's works in some sense reflects the impact of that author on scholarship and research.
iv) The same assumption applies to the assessment of the impact of journals that the accumulated total of citations to all articles published by a journal is an indicator of the impact of the journal on the relevant discipline(s). Many studies have used citation-based measures as evaluation instruments for journals, research performance, university departments, universities, and published works.

v) Citations given may be books, journals, articles, reports, standards / theses / dissertations etc. The relative use of each these types can be ascertained based on the frequency of citations for example various citation studies have shown that journal articles are the most preferred source constructed by scientist since they constitute about 70-80% of the total citations. Similarly citation practices among social scientist indicate that they give equal importance to books and journals.

vi) Collaborative research can be effectively measures from the number of authors in a papers. Such studies can be conducted to understand global trends, national trends or trends in different subjects. Studies in this direction have indicated that collaboration varies from discipline to discipline, within the same discipline from time to time, and from country to country.

vii) Citations in subsequent literature and usage pattern in libraries are considered as two indicators of the obsolescence of literature. Analysis of citations by age of the cited document can show the useful life of document. In order to measure the decay or obsolescence rate of documents, the concept of 'half life' has been borrowed from Nuclear Physics.

Co-citation Coupling

Co-citation coupling is a method used to establish a subject similarity between two documents. If papers A and B are both cited by paper C they may be said to be related to one another, even though they don't directly cite each other. If papers A and B are both cited by many other papers, they have a stronger relationship. The more papers they are cited by the stronger their relationship is.
Bibliographic Coupling

Bibliographic coupling operates on a similar principle, but a way it is the mirror image of co-citation coupling. Bibliographic coupling links two papers that cite the same articles, so that if papers A and B both cite paper C they may be said to be related, even though they don’t directly cite each other. The more papers they both cite, the stronger their relationship is.

3.3 Laws of Bibliometrics

One of the main areas in Bibliometric research concerns the application of bibliometric laws. The three most commonly used laws in bibliometrics are: Lotka’s law of scientific productivity, Bradford’s law of scatter, and Zipf’s law of word occurrence.

Lotka’s Law

Lotka’s law describes the frequency of publication by authors in a given field. It states that “the number (of authors) making n contributions in about $1/n^2$ of those making one; and the proportion of all contributors, that make a single contribution, is about 60 percent” (Lotka 1926, cited in Potter 1988). This means that out of all the authors in a given field, 60 percent will have just one publication, and 15 percent will have two publications ($1/2^2$ times 60). 7 percent of authors will have three publications ($1/3^2$ times 60) and so on. According to Lotka’s Law of scientific productivity, only six percent of the authors in a field will produce more than 10 articles. Lotka’s law, when applied to large bodies of literature over a fairly long period of time, can be accurate in general, but not statistically exact. It is often used to estimate the frequency with which authors will appear in an online catalog.

Bradford’s Law

Bradford’s law serves as a general guideline to librarians in determining the number of core journals in any given field. It states that journals in a single field can be divided into three parts, each containing the same number of articles 1) A core of Journals on the subject relatively few in number, that produces approximately one-
third of all articles. 2) Second zone, containing the same number of articles as a first, but a greater number of Journals and 3) a third zone, containing the same number of articles as the second, but a still greater number of journals. The mathematical relationship of the number of journals in the core to the first zone is a constant $n$ and to the second zone the relationship is $n^2$. Bradford expressed this relationship as $1:n:n^2$. Bradford formulated his law after studying a bibliography of geophysics, covering 326 journals in the field. He discovered that 9 journals contained 429 articles, 59 contained 499 articles, and 258 contained 404 articles. So it took 9 journals to contribute one-third of the articles, 5 times 9 or 45 to produce the next third, and 5 times 5 times 9, or 225 to produce the last third. As may be seen, Bradford's Law is not statistically accurate, strictly speaking. But is still commonly used as a general rule of thumb.

**Zipf's Law**

Zipf's Law is often used to predict the frequency of words within a text. The law states that in a relatively lengthy text, if you "list the words occurring within that text in order of decreasing frequency, the rank of a word on that list multiplied by its frequency will equal a constant. The equation for this relationship is $r \times f = k$ where $r$ is the rank of the word, $f$ is the frequency, and $k$ is the constant (Potter 1988). Zipf illustrated his law with an analysis James Joyce's Ulysses. "He showed that the tenth most frequent word occurred 2,653 and so on. Zipf found, then that the rank of the word multiplied by the frequency of the word equal a constant that is approximately 26500" (Potter 1988) Zipf's Law, again is not statistically perfect, but it is very useful for indexers.