Chapter -1: Introduction

Introduction: India is ranks 5th in the world spending on its total income of GDP on defence. This indicates the importance of defence for any country. It is necessary to have well equipped army with proper education and training facility in defence. Library also plays vital role in development of defenc/military and provides accurate, latest information to maintain in the stream of nuclear power war. Competition Defence Training and Education institutes established and support of library is equally essential. DRDO and DTE are the back bones of national defence development. DRDO is in research whereas DTE are in Training and Education and Libraries are supporting all the time.

Libraries in DTE are the back bones of defence education and provide proper information to cadets /officers to keep them aware of advance practices. To keep abreast of practices in defence libraries have to function in different ways by adapting Technologies and management Techniques.

1.1 Importance of Education and Training: Education is the most powerful instrument for bringing out effective changes in society. It is also the most important factor that caters to the total development of human personality. It is no understatement that learning enables the individual to put his potentials to optimal use. Without education, the training of human minds is incomplete. No individual is a human being in the working world until he / she has been educated in the proper sense. Education is a learning process and involves gathering of knowledge. Higher education includes activities like teaching, research and social service activities of universities. Education is a process whereby information is provided and communicated to educators and trainees to build innovative concepts for a developing society. Education, research and training have received more value in an information society. Along with the formal education system, new practices like distance learning is gaining importance.

1.2 Defence Training and Education (DTE): In the past, education was not given due importance in the Armed forces or in defence / military institutions at the time of entry, one could get an easy entry in to the armed forces as an infantryman and there was no need to have any additional education. But recent developments in the system
have changed the practices and upgraded the quality of personnel who protect the nation. Now advanced techniques and tools are developed and being used in the defence forces widely. The expectation from the armed forces has increased manifold and they have to perform different roles. To keep in pace with the changes in the system and the requirements of the nation, new entrants were provided with better education. Serving in the armed forces, now needs specialized and intense experience in handling modern tools and techniques. More and more technology is being used in the armed forces. As a result, there rose the requirement for proper education and training to defence staff. The defence system of any nation has now realized that different educational programs are required and are to be updated regularly to match with the requirement of the defence system. (www.usmilitary.com)

Military / defence education and training is a process which improves the capabilities of military or defence personnel in performing their respective roles. Before any person gets the authorization to operate technical equipments on battle field, he or she must be educated and well trained for this purpose. Many countries thus established military academies for each branch of service viz. army, navy and air force. These academies offer degrees in different subjects, similar to colleges. Academy graduates are generally called as rank officers and entitle for the entry in to defence services. (http://en.wikipedia.org/wiki/Military_education_and_training)

In India there are around 20 institutes established by the armed forces to educate and train the entrants into the armed forces. These are specialized educational institutes unlike the formal education system run by regulatory bodies like UGC, MCI, AICTE etc. The vision and mission of defence education is unique and different in its own way and hence these educational institutes are managed by the Defence Ministry. There are many organizations involved in the defence education system like sainik schools, military schools, army public schools, military preparatory schools etc., which supports military education practices till entry into the defence education system through an entrance test.

It may be reiterated that defence education and training is a process which intends to establish and improve the capabilities of defence personnel in their respective roles. While joining the armed forces is either a voluntary or compulsory varying from
country to country, before any person in actual is battle worthy and can operate equipment which require technical skills, they primarily undergo physical, educational and specialized training. Only after getting proper training and related defence education, they may begin their normal functions as a defence personnel. As primary training, a cadet attempts to get the basic information and training in techniques necessary to be an effective service member. To achieve this, service members are drilled physically, technically and psychologically. The drill instructor has the task of making the service members fit for the armed forces. After finishing basic training, many service members undergo advanced training more in line with their chosen or assigned specialties. In advanced training, defence technology and equipment is often taught. Many large countries have several defence academies, one for each branch of the service, that offer college degrees in a variety of subjects, similar to other colleges. However, academy graduates usually rank as officers, and as such have many options besides civilian work in their major subject. Higher ranking officers also have further educational opportunities.

The Indian defence services have established numerous and distinguished academies and staff colleges across India for the purpose of training professional soldiers in new generation military sciences, warfare command, strategy, and associated technologies.

1.3 Vision and Mission of Defence Training and Education: A mission statement conveys the fundamental purpose of the organization. It defines the customer and the critical processes. It informs the desired level of performance. On the other hand, a vision statement outlines what the organization wants to be, or how it wants the world in which it operates to be. It concentrates on the future. It is a source of inspiration. It provides clear decision-making criteria.

Every organization has its mission and vision. Similarly DTE institutes have their own vision and mission statements. Defence training, education and development is a support to the progress and employability of defence personnel. It does by providing proper education, and training, including business skills, application training, and competency recognition. Education, training and development are terms used in
parallel but all lead to one outcome and i.e. learning. For example, the vision and mission behind learning in defence as stated in the NDA document is:

**Vision:** “The National Defence Academy will continue to be the premier joint training institution and center of excellence in the world for producing junior leaders, for the Indian armed forces, and armed forces of friendly foreign countries, equipped with the mental, moral and physical attributes required to cope with the challenges of the future battlefield and capable of leading troops to victory, in conventional, non conventional and asymmetrical conflicts”

**Mission:** “We in the NDA would provide the highest standards of focused training in the professional, intellectual, physical, and leadership spheres as also moral, ethical grooming to cadets, using innovative concept/technologies, corporate and modern practices with a view to providing the armed forces, competent potential junior leaders with a high standard of integrity, equipped to function in the battlefield of the future and capable of leading troops to victory. We would ensure the maintenance and further enhance the infrastructure of the academy thereby providing a suitable training involvement for all existing and future requirements, simultaneously ensuring that heritage value of the NDA is constantly kept alive and vibrant. Foster an environment that encourages individual growth, promotes welfare, enhances quality of life for personnel to make the NDA family happy and spirited.” (http://www.nda.nic.in/images/mission_vision_NDA.jpg.)

The overall outcome of the mission and vision of different defence education and training institutes could be summarized as:
(http://indianarmy.nic.in/writereaddata/documents/nda-joining-instruction.pdf)

- Preparing cadets for the primary mission i.e. defence of sovereignty and just-in-time training for contingences.
- To offer appropriate Education training that complies with international standards of competency.
• To run specific training programs to prepare the force to conduct operations in special environments.
• Fostering interoperability within the military organizations to enable the force to operate under collective security arrangements and/or peace support operations.
• Defence Training and Education supports the development of defence professionals.
• Promote learner-centered education based on both traditional and modern facilities.
• Promote the innovative use of instructional technologies.
• Create learning objectives which facilitate a depth of learning that can be readily applied through practice.
• Support of quality academic programs at partner defence education and training institutions.
• Guide and mentor reforms in professional defence and military education, both in individual education institutions and in a defence-wide holistic approach to defence education and training.
• It can be summarized that the mission and vision of the defence education and training is to develop the skills in the army, air force and navy.
• Provide the requisite educational standard and acquire mental and physical qualities, essential to their progressive and continued development as officers of the fighting services.
• Provide basic service training as well as assist in developing their character, initiative, self-confidence and, above all, qualities of leadership.
• Development of ability to appreciate the inter-services aspect of the armed forces.
• Develop an interest in extracurricular activities of the outdoor type.
• Inculcate the spirit of the Honor Code as well as ethical and moral values.

1.4 Role of library towards education, research and training: Human society cannot survive without reference to the past intellectual contributions of men. He has also to keep himself up to date with the growing and ever adding knowledge in the domain of disciplines such as humanities, social sciences, science and technology,
engineering, defence science etc. This can be done only with the help of libraries. Today libraries are at forefront of knowledge gathering. They have become an essential ingredient of a civilized society that contributes towards education, research and training. Higher education is obviously more dependent on libraries, information centers, data centers etc.

Libraries are established for the systematic collection, organization, preservation and dissemination of knowledge and information. It is very important for man to preserve and maintain the valuable knowledge and information contained in the books and documents because it may be required for future generations. By preserving the documents in a library this knowledge can be made available to others so that they can benefit from it. Establishment of libraries is not a new concept but its span is developing with the applications of information technology. Information is at the heart of the scientific community as well as scholars and educators and without information it is not feasible to undertake advanced projects or studies. Research communities are dependent on information support and libraries provide value added services to the user community. “Training and development” or "learning and development" is one of the most important aspects in the education system. Training sharpens the experiences in the area and makes personalities sound. Libraries are the backbone for the trainers in various disciplines to adjust with the latest developments.

Libraries do not exist as autonomous entities. Their existence is dependent upon the society out of which it has grown and it is directly influenced by the cultural and social changes that are taking place within it. With expanding knowledge, increased publication and demands for broader and better library services on one hand and shortage of funds on the other hand, libraries began to look more critically at their own organization and activities. Similarly technological and social changes have presented new problems for library and have opened new fields of services and activities in knowledge dissemination. Due to application of the information technology, libraries are reshaping and provide better services and library activities. These changes call for new techniques and for a critical re-examination of old ones. One of the important and effective means of accomplishing this task is to undertake reviews of library systems, to analyze its developments. There is a need to assess and
evaluate the libraries to provide better activities using technologies. A review of libraries working in similar areas and regions needs to follow trends to cooperate at maximum level. This is possible only when a survey of the libraries is conducted and their contribution to the society, evaluated.

Modern aspects of technology have led to the transformation of the libraries. Libraries are passing through various stages of modernization due to constant changes, as technology and new management techniques are being implemented to achieve economy in the processes as well as speedy dissemination of information to users. Hence the role of libraries is shifting towards modernization and librarians are facing new challenges due to the emergence of new technology and management practices.

1.5 Role of Libraries in Defence Training and Education: Defence training and education activities are also supported by establishing libraries to support the activities. But though the nature of collection and services provided through these libraries are similar, they differ in few aspects. These libraries are specific to the collection and hence are treated as special libraries in addition to status of academic libraries. Education and training has gained importance in all sectors of knowledge development. It is a specific branch of educational system.

In the world, every country has developed and maintained defence systems for the safety and protection of the nation and therefore it occupies an important place in the nation. In defence specific areas, it is observed that new research continuously adds to the new innovative tools and techniques which suit the recent or modern environment and is useful in protecting the nation using advanced technology. Though the defence system in every nation is strong, at the bottom line it can be attributed to the defence education and training system, which plays an important role in supporting the development of defence related activities. In turn, the development and contribution of institutes in defence education and training mainly rest on the library and information services.

The libraries in the defence institutes are treated at par with academic libraries as its nature is to support the education of defence personnel. However, since these libraries exist and function for specific defence users and its collection is also
developed to manage the defence sector, these libraries can be also treated as special libraries. This dual function is monitored by the libraries attached to defence training and education institute and are operated by the Ministry of Defence. The library staff in these libraries are adequately qualified and well acquainted with the requirements of the users from defence education and training.

The library acts as a major support to develop innovative methods and techniques in the defence personnel. Education at the preliminary level (Entry Level) and training for the advanced learning is the base for development. In defence education and training, libraries support these activities and it is therefore necessary to keep these libraries updated with knowledge as well as technology. These libraries need modernization so that the required information and study material may be made available to users easily. The networking of these libraries may be very fruitful for the future development and benefit to the users.

In defence it is observed that libraries are divided in two groups. One group relates to Research and Development activities and is managed by the DRDO. This group of libraries supports the needs of R and D personnel and their main activities are development of new ammunition, instruments, explosives, etc. The second group is related to the basic need of the defence i.e. defence education and training, in which the facilities are developed to educate and train the entrants in this specialized area. This activity is monitored by Ministry of Defence and different institutes are established in the country to educate and train the personnel along with a suitably developed library system. These libraries cater to the needs of defence education and training in specific areas assigned to them. Though these institutes and libraries are few in number, their activities are more important considering the education and training concept. Keeping the track of the development in defence sector these libraries are to function more efficiently to support the education system. There is a specific importance attached to these libraries and hence a detailed study of its performance needs to be carried out.

It is hoped that survey of libraries attached to defence training and education may help in understanding the present status and may provide an idea for framing the suitable guidelines for modernizing libraries. Further steps may be undertaken to
network these libraries so as to provide quick access to the information irrespective of its location and format using the ICT.

1.6 Role of Library professionals in Modern Era: A librarian’s role is very vital in an information society. Librarians are the key personalities managing the information resources and analyzing the needs of the users. Traditional librarianship was restricted to the print media and to the limited services to users, but due to information explosion, rising prices and limited budgets it is difficult to provide services economically. However the professionals have adapted different practices to manage libraries economically, e.g. proper collection development, implementing technologies in the profession etc. Information Technology has changed the face of the library and library professionals and its applications have proved to be more beneficial as compared to libraries of the past in many aspects. There is a need to use the modern techniques of management and information technology and make the library procedures simple and economical. Resources sharing are obvious and a must and many organizations have developed library networks at various levels to cooperate. In this context of modernization of libraries, library surveys would definitely be useful in analyzing the problems of libraries and contribute to solving them more effectively and economically. Such studies may highlight the development and progress as well as suggest new methods for the better services. Librarians in the information and technology age have to acquire different skills to survive in the profession. Evaluation and analysis of activities is the best media to assess the progress of libraries in a particular area. The role of a librarian is expanding as more and more technology is being used in the profession. There is a need to develop additional skills along with traditional skills which helps in managing libraries and information centers. The role of a librarian is vital to the user community as he serves different users and provides services to make them aware of new events in the area of users’ interest. There are many opportunities and challenges in the profession as the libraries are changing from traditional to modern and this also requires the re-engineering of the role of the librarian.

1.7 Place of library professionals in defence training and education: Keeping in mind the development and challenges in the profession, librarians in these groups of libraries need to apply management techniques and ICT applications to make the
resources available to users efficiently and effectively in an economical way. It is seen that though library professionals are adequately qualified they do not apply modern techniques and there is a need to overhaul the libraries by the librarians and develop resource sharing activities among these libraries as the group is small and manageable. Advanced training in the management of libraries is to be given for application of new methods and techniques and to make the resources available to users economically. Librarians in this field need to develop best practices in the area and use of technology for the advanced services needs to be established as well. The review of the opinions from the librarians, point to the fact that, if additional funds are provided to the libraries, then it is also possible to provide add on the services, in addition to the existing services.

1.8 Need for the study: The information policies developed by nations have clearly shown that the information is a vital component of an information society. Libraries are the only places through which one can get maximum support for the development of research potentials. For the proper development of the library system in any area of knowledge, it needs to support few issues like connectivity, content and competencies. Connectivity covers aspects like building information networks for keeping free flow of information, universal access to information generated, and using technologies to achieve interoperability in libraries. This may assist in developing proper information infrastructure and system to keep the users aware of the latest developments in their areas. Content includes the creation of core content and also ensures its proper delivery to the users. To make this possible, through the applications of technologies in libraries, digital collections, network based resources, internet based information sources, navigation tools over internet can be developed and made available to users easily and economically. The protections of the human creation provisions are also made to protect the knowledge through IPR (Copyrights, patents etc.). Competencies have to be developed at various levels including users and library professionals. There is a need to develop universal information literacy, to develop information specialists to provide better services to users, and formulate information policies for the better collection development.

Keeping in view the trends in the library profession and changing practices of libraries in an information and technology era, it is essential to re-engineer the
libraries to meet the needs of users in the advanced age. The area of defence education and training is an important field in every nation. The development of the Indian defence system at grassroots level is based on institutes participating in defence education. The libraries attached to these institutes are supporting the education and training program in the defence sector.

1.9 Statement of the Problem: There is a need to evaluate the libraries associated with education and training libraries in the defence sector. This may help in analyzing the activities or library practices which needs to be reorganized or re-engineered and new strategies developed so that the parent organization can receive better support. It was hence, decided to make a survey of libraries attached to defence education and training centers or institutes in India and find out the status of the activities and functions in view of modernizing the library activities. This is an area which has been vastly neglected even though it involves the defence sector which is of paramount importance for nation building and has to keep in pace with the advances in the global arena. Library services are rapidly gaining importance and value in the era of information and there is a need to develop a proper Library system using modern technology in the defence sectors so as to provide proper services to the users. On conducting a detailed literature search it was noticed that there are no studies based related to the defence library performance in the digital era. Hence the researcher selected “Modernization of libraries attached to the defence training and education institutes in India: A study with reference to services and sources” as this area for research study which deals with a very specific issue. The needs and demand of the users and their information seeking behavior is to be evaluated to provide proper services based on proper collection development.

The researcher is also presently employed in the defence training and education institute, as a librarian and has a fairly good practical experience of the functioning of the libraries in the system. Having a considerable acquaintance with the environment, it is expected that the researcher can make the right approach to collect, organize and analyze the data so as to formulate a viable mechanism to develop the libraries and to cater to the needs of the users in the defence training and education system.
1.10: **Aim:** The overall aim of the present research work is to evaluate the practices followed in defence training and education libraries, resources available in these educational institutes in India and also review the automation status and library services provided by them. Based on the survey a suitable model for the defence training and education libraries for collection development, automation, networking of institute libraries and information services to be provided to users may be developed and presented at the end of the study which may be useful to library professionals as a guidelines while modernizing libraries.

1.11: **Purpose of the Study:** The purpose is to evaluate the present status in the light of information technology applications and suggest the means to modernize these libraries to support development of skills of users. A model developed may be useful to defence education and training libraries in adapting benefits of electronic publications and networking for better use of resources.

1.12: **Objectives of the Study:**

The major objectives of the research study are:

1) To take stock of the libraries and their activities in the area of defence training and education.

2) To examine the procedures adapted for collection development, technical processing and organization of the resources.

3) To find out the useful services provided by the libraries.

4) To analyze the impact of ICT and internet in the users community.

5) To workout the steps for the systematic ICT introduction in the libraries and providing some essential need based services.

6) To evolve a model plan of action to modernize the library system so as to adapt all viable ICT in its organization, transmission and distribution covering the changing formats of information in the emerging scenario.

1.13: **Research Method Used:** This research study use the descriptive method to collect the data from the responding libraries and a questionnaire technique is used. To support the survey of libraries, interviews with few professionals in the field is conducted to elicit the personal opinions, future views about libraries. In addition,
discussions with experts are to be held to enable mapping the trends in the field. The literature review is also conducted to analyze the development and the performance of institutes in the area of defence. Thus survey method of research was an authentic choice in the present investigation involving observation and examination of various library activities where both the component i.e. user and the library managers are involved.

While preparing questionnaire proper care was taken to cover all the aspects related to libraries covered under study. The questions which are dividing in to nine units are systematically and logically covered. The questionnaire covers the research questions, to seek information from all the three wings of defence area i.e. army, navy and air force. The interviews conducted with library experts were unstructured to get clarity and implicit knowledge from the librarians serving in the various types of libraries including defence education and training. Though the literature was scanty in this area, the literature collected using different resources was also helpful in building the concepts which formed part of the study.

1.14: Structure of the Questionnaire: The questionnaire consist of nine units (questionnaire appended as Annex I) in which, questions covered were related to: the organization or institution, library organization and management, services provided by libraries, efforts made towards modernization, activities related to resource sharing, availability of equipments, better use of technology, availability of different software to perform different functions in the library, digital initiatives, digital resources, collection development and policies related to collection development. The data from the different libraries is collected based on these aspects, which helped to develop the concept.

1.15: Distribution of Questionnaires and Data Collection: A set of questionnaire was distributed among the 20 libraries (detailed in Annex I) attached to defence training and education institutes located at different places in India. The questionnaires were distributed by post outside Pune and by hand at the local institutes in Pune, to the concerned libraries and librarians were requested to fill in the data and return the questionnaire for the study. Librarians cooperated in providing all data (except financial) and the response to the questionnaire was 100%.
The researcher had discussed with librarians from local libraries like Pune University, DIAT, HEMRL, AFMC, CME and outside Pune IMA Dehradun (Uttara Khanda), Infantry Schools, Mhow (MP), INA, (Kerala), NDC New Delhi, AFA, Bangalore (Karnataka) etc and interviews with these librarians helped in gathering tacit knowledge and their view regarding the re-engineering of these libraries. The discussions were very fruitful and also useful to the study. The discussions held with these professionals highlighted their views and also clearly pointed to the need for such studies for the improvement in the field of defence education and training. It also brought out the immense need for undertaking a massive program for completing full automation and initiating resource sharing activities among these libraries by suggesting a model in the study which will help others working in the field. Besides ensuring the reliability of data, the observations of library operations enabled the researcher to get an insight into the functions, activities, services, collection, status etc carried out in this field presently.

Data thus obtained through questionnaire, interview, personal visits to libraries, literature review etc was analyzed, interpreted and presented systematically in this study with the help of statistical presentations using tables, graphs and figures etc wherever required. To present the logical data in a proper manner, the researcher along with a programmer developed a small software program to compile the collected data as per the questionnaire and prepared a database using Microsoft Excel program and converted it into different graphs automatically. This was also an experience in using programs for calculations and drawing graphs.

1.16: Scope and Limitations of Study: This study is a survey of defence training and education institute libraries in India covered under Ministry of Defence. There are about 28 institutes in this area but prominent institutes are considered for the survey and 20 institute libraries are selected for the study. The reason for the selection of these institute libraries is based on the fact that higher graded training education facilities are made available for rank officers, cadets etc. Lower graded training institutes are excluded from the survey.

Since defence training and education is a very specialized and highly recognized area in defence field and since no one has studied this area, the researcher planned to
undertake the survey of these institute libraries and review the developments, find user needs and services provided to rank officers (users). The study thus mainly reflects and covers the training and education institutes of defence personnel. These institutes are established only for the purpose of education and training and no classified information is housed in these institute libraries.

1.17: Organization of Study:

The overall research study is divided in to following logical eight chapters

Chapter 1: Introduction: This chapter covers general introductory information of the profession, defence training and education institute, functions of libraries attached to these organizations, need and importance of education and training in defence, including need for the study.

Chapter 2: Literature Review: In this chapter a detailed review of the literature consulted for the study is reported under different facets. The literature collected was found very useful for completing the study.

Chapter 3: Defence Training and Education Institutes in India: Historical Perspective: This chapter focuses on the historical development of training and education in the defence and activities performed by them in detail. The chapter highlights the trends in its development. An inventory of such organizations involved are analyzed and reported in the study.

Chapter 4: Modernization of Libraries: This chapter reviews the changing role of the libraries, efforts towards applications of the technologies, and providing qualitative training and education to the entrants based on the technology. It also explains need for automation, re-engineering of libraries and trends in LIS etc.

Chapter 5: Data Analysis: Interpretation and Presentation: This chapter covers the analysis of data collected through questionnaire. Methods and techniques adopted for the analysis of the data is also mentioned in this chapter.

Chapter 6: Best Practices for Defence Training and Education Institute’s Libraries: This chapter highlights the best practices in the profession and achieves the objectives and keep libraries up to date for serving the users. The best practices in
administrative activities of libraries, collection development, use of ICT etc. are elaborated. Best practices for libraries of DTE are also presented.

**Chapter 7: Model for modernization of DTE Libraries:** This chapter discuss in detail the action plan for modernizing libraries in general as well as DTE libraries in particular. Model action plan gives an idea for re-engineering of DTE libraries.

**Chapter 8: Chapter 8: Findings, Suggestions and Conclusion:** This chapter presents the list of findings and the suitable suggestions made keeping in view the findings. Further the study is concluded with a logical conclusion.

**Bibliography:**

**Appendices-1: Questionnaire**

**Appendices-2 : List of DTE Libraries**

**Summary:** This chapter covers the important of defence training education and institutes established by Ministry of Defence. The Chapter highlights in detail the aim, purpose and objective for conducting this study.

**References:**


