2.1 Introduction

A summary of the literature on a particular topic is called a review of the literature. It provides an overview of methodology and enables the researcher to identify relevant theories, techniques, and gaps in the corpus of previous research. A literature review's second goal is to pinpoint the primary report's subjects, summaries, and integrated and critical information. A thorough assessment of the literature that is pertinent to his or her area of expertise is essential. A literary analysis does not specifically track new and additional scholarships, but it can be used as a reference, intermediary step, or original scholarship report. Although the fundamental reports utilized in literature are often written records, they can also be spoken. The scholarship behind these reports might take the form of empirical, theoretical, critical/analytical, or methodological research. Through the literature review, the researcher gains a comprehensive understanding of his particular area of study. It gives a general overview of the approaches and methodologies that are recommended as being appropriate and efficient.

Therefore, a thorough examination of the literature in this discipline is required to gather background knowledge on the topic of the current research. Different sources need to be reviewed in order to avoid duplicating previously published research from the beginning of the library automation process to the present. The countless changes, innovations, and advances that have taken place on a national and worldwide level can be explored by reading the literature. Manuscripts, books, journals, essays, dissertations, theses, and online resources connected to the automation of Engineering College Libraries of Punjab are currently available, along with published and unpublished works. Under several literary categories, the study of literature has been presented in ascending chronological sequence. Only chosen objects were used in the current investigation.

A literature review includes published works in a particular subject of study as well as, on occasion, works published in a certain period. A literature review may consist only of a list of the sources, but it usually has an organizational framework and incorporates both synthesis and summary. A synthesis is a rearranging or rearranging of the content in a summary, which is a synopsis of the main ideas from the original source. It might offer a new take on antiquated knowledge or combine modern and

antiquated viewpoints. Alternatively, it could summarize the intellectual history of the field, including important debates. Depending on the situation, the literature review may also evaluate the sources and suggest to the reader which are the most current or pertinent.

2.2.1 Review related to Library Automation

Salmon (1977) it described important to comprehend development of the library automation by implying more than the specification in the continuous reduction of unit costs. Salmon's procedures and their instructive analysis of some aspects of the current library automation scene are explained, as well as the developmental and comparative aspects of library automation.

H. K. Kaul (1990) Library networks in the United Kingdom and Spain: The Prospects for India," which was published in the "Herald of Library Science," discusses how far libraries in Europe have progressed with automation. He provided a general overview of UK networks, focusing on the British Library's automation programme, the primary work areas of the Joint Academic Network (JANET), and the online cataloguing system CATS developed by the University of Cambridge. Among the other cooperation projects highlighted was the Commonwealth Agricultural Bureau International (CABI) data repository, which highlights their efforts. In his list of broad projections, he emphasises the necessity for automation projects in Indian libraries.

Farajahlou (1994) the present level of mechanization in academic libraries in Iran is attempted to be explained in this article. Iranian academic libraries' main issues with dealing with modern technology and the absence of institutional strategic plans for library automation are described along with a survey's methodology and findings. This survey outlines the history of library automation development in Iran and clarifies its methodology.

Bela. Mader (1995) described the study "Library computerization Systems in Academic Libraries in Hungary" explored how Hungary's academic libraries' automation systems highlighted the need to enhance education and training for postgraduate courses through distant learning. In order to increase productivity and

provide high-quality library services, the work also placed a lot of attention on modernizing academic libraries.

G. K. Manjunath, (1998) In "Library Automation: Why and How," a presentation presented at a workshop on information technology and library automation, outlines how library automation, which began in the late 1970s in a few specialized libraries, extended to widely held university libraries. Due to a number of issues, it has not yet gained traction in Indian college libraries. This essay aims to list the obstacles, practical methods for automating the library, and accessible technology.

Arlene. Cohen, Claxre. Hamasu, and Irene, M, Lovas. (2000) analyzed the study is entitled "Innovations in Networking to Provide Electronics Delivery of Documents to Health Professional in the Western Pacific," which was presented at the IFLA conference in 1966, It was observed that during the past five years, there have been considerable changes in Guam and the Western Pacific region's health professionals' access to biomedical literature. The emergence of the ability to send papers electronically over the Internet has contributed to the enormous change.

A. A. Manifold (2000) According to the article "Principled approach to selecting an automated library system" in Library Hi Tech, following some common sense guidelines will help ensure a successful outcome. The methodology must be long-standing oriented and take into account the institutional environment that the system will operate inside. The importance of user participation in the selection process is growing as society moves toward user empowerment.

Macias-Chapula, (2001) According to the EJISDC study "performance of a Hospital Library Automation Project in Mexico: Learning from Experience," In affluent nations, health library automation is a well-established area of academic study and professional practice. This sector is uncommon in developing nations. Nonetheless, in an attempt to modernize their services, health libraries in these nations are acquiring new information and communication technologies. This document aims to outline the opportunities, challenges, and lessons discovered during the General Hospital (MGH) library automation project's implementation phase in Mexico. Lessons learned, challenges, and opportunities are often overlooked when information technologies are transferred to developing countries.

Atul Bhatt (2002)the feasibility analysis of library automation in medical college libraries connected with Saurashtra University was completed for the M.L.I.Sc. Degree and presented as a dissertation to Bhavnagar University, Bhavnagar. It describes the state of library automation in his study's participant libraries. Additionally, its outlines the stages involved in hospital library automation and points out problems and obstacles specific to automation in smaller libraries. There were three medical colleges that took part: a small, a medium, and a major one. In order to create an automated programme in the participating medical colleges' libraries, the procedures and amount of time needed for project implementation were also specified.

John. Bruer, T. Goffman and Kenneth Warren (2003) According to the study "Selective Medical Libraries and Library Networks for Developing Countries" published in the "American Journal of Tropical Medicine and Hygiene," the provision of selective collections devoted to the most popular and practical materials should take the place of the efforts to build all medical libraries inclusive and self-sufficient, in particular in developing countries with limited resources. Individual libraries can gain access to less popular materials through resource sharing networks linked to large comprehensive global libraries.

Babu and Tamizhchelvan (2003) the mentioned article titled "An inquiry interested in the features of OPACs in Tamil Nadu," which was published in Library Review, the findings of a study survey that looked at the features offered in online public access catalogues (OPACs) in Tamil Nadu are discussed.

Manoj Kumar Sinha and Kishor Chandra Satpathy (2004) Describe resource sharing in the article "Resource Sharing and Library Networks in India" describing its purposes and necessity in the area of science and technology in order to precisely satisfy users' demands in the features of the explosion of information, it was published in the journal Herald of Library Science. They highlight the exigency for automating and networking libraries by explaining the objectives and purposes of the many

networks that are available in the country, such as networks supported by the NISSAT and the UGC, as well as certain foreign networks.

H. Girdhari Singh, FalgunaKoijam and N. Vidyavati Devi, (2004) in the article "Regional Institute of Medical Science Library Campus Networking: A Proposal." given at PLANNER 2004, it is briefly discussed how RIMS developed and how its library was upgraded to become one of India's six regional libraries. The goal of the study and the library collection are also provided in the report. The benefits of the library's networking and database creation have been emphasised. The component of the CAS that will be transformed to an electronic version is provided. The networking of the library's local area network (LAN), future plans presented in phases, and manpower planning are also displayed.

Breeding (2009) According to his article, "Next Generation Library Automation: Its Impact on the Serials Community," libraries are changing, and current ILS cannot support e-content, Electronic Resource Management (ERM), and other future requirements. He envisioned a prospective library automation paradigm and listed its outstanding characteristics. Serials professionals should be well-informed of emerging library automation ideas and needs, the author has cautioned.

Onoriode (2012) demonstrated the value of automation in building collections and acquisitions for university libraries. The descriptive survey approach was utilized to collect data through a questionnaire. Frequency counts and an easy percentage were used to examine the recovered data. Analysis was done on frequency counts and a fundamental proportion of recovered data. The investigation revealed that the libraries lacked an automated library foundation. A library needs the right tools to accomplish its goals, and this automation aids in better controlling the process of collecting and buying books. However, automation is hampered by a lack of funding, managers' lack of motivation, insufficient energy supplies, etc.

Thompson and Pwedura (2014) a study titled Library Automation at The University for Growth Studies: Challenges and Prospects found that automation improves library facilities and increases access to its materials. They discover that African libraries are having trouble automating their operations. The authors chose the University for Development Studies (UDS) library automation library in Northern Ghana and

performed fully automated cataloguing and circulation services. They described the procedure, the issues encountered, and the takeaways from service automation.

Arora and Singh (2015) described research to obtain access to the resources and amenities of those libraries listed above, "Library Resources and Services in the Selected University Libraries of Haryana, India." The authors discovered that while library automation at Haryana's chosen state university libraries was partially automated using LIBSYS software and was still being developed, it was fully automated in the chosen private university library using open source software Koha. They recommended that the government show serious consideration and appropriately plan for budget and financing as well. They recommended that in order to meet customer needs, library staff members should improve their training and professional skills.

Tyagi & Senthil (2015) it described library automation and its many platforms in their paper, "Library Automation in India: Assessment of Library Services Platforms." The transition from a standalone database system to cloud-based technologies, between Integrated Library System and Integrated Library Management System, was noted by the author. The writers made an effort to discuss both traditional terminology and cloud-based architecture. They talked about maturity models, aggregation and dissemination services, as well as library-specific tenant-based software services. Koha is the most popular open-source cloud software, according to the study's authors, while e-Granthalya is the most popular proprietary cloud software. Additionally, the writers covered both single-tenant and multi-tenant SaaS models.

Gautam& Fatima (2016) the central university libraries in North India were the focus of the study, which was summarized to highlight the function and execution of an electronic cataloguing system. In order to provide impartiality to the analysis, interview and observation techniques were also used. Results show that introducing a cataloguing programme has had various degrees of success. Additionally, the findings demonstrate that libraries have happy user populations due to automation-enabled quick retrieval. It standardised things and got rid of differences. The morale of the workforce has also increased in the automated environment.

Ansari, Gautam& Fatima (2017) at their study, "Library Automation in Indian Central university: Issue and Challenges," they concentrated on the state of an electronic cataloguing system and its application in north India's central university libraries. Questionnaires were used in the research to gather data in addition to interview and observation methods. They came to the conclusion that the introduction of a cataloguing programme progressed at various rates. Additionally, they came to the conclusion that the convenience of retrieval pleased library patrons more after automation.

Jayamma& Krishnamurthy (2017)in their study article "Perspectives of Library Automation in Developing Countries: A Review," the authors reviewed the key library automation studies from around the world. They reviewed research on library automation done in developing nations generally, and particularly in India. They came to the conclusion that automation has significantly improved library quality, decreased the workload of library workers, and given clients faster and higher-quality service. The evaluation also dispelled misconceptions about library automation for future study, especially in India.

Takappa& Reddy (2017) Authors investigated the automation and ICT infrastructure in the 236 polytechnic institutions in Karnataka state for their study, "Present condition of library automation in polytechnic colleges in Karnataka state: a survey." Over half of the libraries were already mechanized, they found after gathering the data through questionnaires, in-person interviews, and observations. While some libraries were automating their operations, the majority of them had similar challenges such a shortage of competent staff, a lack of funding, inadequate infrastructure, etc. In order to overcome the barriers to library automation, they suggested that librarians and college administrators continue their efforts. They also suggested that more library staff members be trained for better library services.

Singh & Jassal (2018)conducted an examination of PLANNER's proceedings from 2006 to 2016. In order to conduct this analysis, data and information were taken from the INFLIBNET database and gathered and examined using Bibliometric techniques to determine average quotes, author trends, keyword patterns, institutional and state-wise contributions, etc. They discovered that 3510 citations were made in total among

355 papers published during the time, averaging 9.89 quotes per article. Throughout the relevant period, a total of 666 people contributed from all over the world.

Rajendran& Kumar (2018) from its research study on "Automation and Networking status among college libraries associated to Bharathiar University," survey revealed that 92 of the 120 university-affiliated college libraries were computerized and had library programmes to automate their services. Of these, libraries account for 75% of application usage, while networking tools account for 62%. They came to the conclusion that automation and networking were crucial for the effective utilization of library resources, and college libraries are moving toward the adoption of these technologies.

Liu & Fu (2018) in their work "Shared Next-Generation ILSs and Academic Library Consortia: trend, opportunity and challenge," the authors examined library consortiums and shared next-generation integrated library systems.

Miller, Ellen G (2019) it expressed agreement on the future of library record systems between stakeholders and library automation planners in his work on "Faculty engagement in Library Automation Planning." Library automation preparedness required to be transparent, comprehensive, and inclusive in a period of contentious campus dynamics including budget constraints and decreased mobility.

Lenox (2019) in the article "It's Automatic: Library Automation as a Catalyst for Transformation," recounts the transition from the traditional Warrenton Community Library System to automation. She claims that automation is the catalyst for an institutional shift, and in the initial stage, computerized weeding and categorizing were used. Although they were nearby, the automated libraries housed various collections. The sorting, categorizing, retrieval, and other device modules were all finished. Small libraries, according to the author, should exist since the general public is able to support and encourage them along the way.

Martin (2020) described that the Cloud computing resources are applied during the automation of libraries. Through the use of cloud services, library operations may need dedicated space for the servers, software, and other gear, while prices may be decreased and services may be automated. The activities of libraries, such as

acquisitions, cataloguing, circulation, discovery, and information retrieval, are consolidated, unified, and optimized using library-based cloud computing services.

Patel and Babare (2020) Major obstacles to library automation are described in the article "Automation and Networking of Libraries." They examined the direct and indirect elements that are essential to the library's automation. The writers emphasized the different roadblocks that stand in the way while explaining how crucial solid planning is to automation. They recommended that authorities take significant action to remove the obstacles while maintenance in mind the goal and needs of library automation. Automation have to be used in libraries to improve services and resource sharing.

Tsekea (2021) the study describes the necessity of continuing professional development and capacity building for professional librarians and information scientists in university libraries. The demand for the knowledge and abilities of library and IT professionals has increased as a result of shifting trends in higher education, ICT, and the shift to a learning environment. More than ever, there is an urgent need for training. University libraries require ongoing adaptation and trained employees to deal with this quickly changing environment in order to successfully and efficiently provide resources and services if they are to maintain their relevance in the twenty-first century. As a result, the chapter highlights the importance of instructors in academic libraries.