

CHANGE MANAGEMENT OF UNIVERSITY LIBRARIES IN KERALA

*Thesis submitted to the
University of Calicut in partial fulfilment of the
requirements for the award of the Degree of*

DOCTOR OF PHILOSOPHY IN LIBRARY AND INFORMATION SCIENCE

By

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2024**

DECLARATION

I hereby declare that the work presented in the thesis entitled **Change Management of University Libraries in Kerala** is based on the original work done by me under the guidance of Dr. Abdul Azeez T. A., University Librarian, C. H. M. K. Library, University of Calicut, and has not been included in any other thesis submitted previously for the award of any degree. The contents of the thesis are undergone plagiarism check using iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found within the permissible limit. I also declare that the thesis is free from AI generated contents.

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I, **Dr. Abdul Azeez T. A.**, do hereby certify that the thesis entitled **Change Management of University Libraries in Kerala** submitted to the University of Calicut, is a record of the bona fide study and research carried out by **Ms. Sheeba Francis** under my supervision and guidance. The report has not been previously formed the basis for the award of a Degree, Diploma, Title or recognition.

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LIST OF ABBREVIATIONS AND ACRONYMS

CM	:	Change Management
CU	:	University of Calicut
CUSAT	:	Cochin University of Science and Technology
KAU	:	Kerala Agricultural University
KNRU	:	Kannur University
KU	:	University of Kerala
MGU	:	Mahatma Gandhi University
SSUS	:	Sree Sankaracharya University of Sanskrit

ABSTRACT

The change observed in all-encompassing modernity, force higher education sector and thus contemporary libraries to keep updated and modified. Adapting to change is challenging and complex. Appropriate management of change is essential in libraries for being relevant and outstanding. Empirical research on management of change in libraries would indeed help in achieving the goals and objectives of libraries through modifications and redesigning in the current method of operation.

The study investigated the change management practices followed in university libraries in Kerala. The scope of the study is extended to how the components of change management have related to the independent variables selected for the study. The entire working professionals in the chosen seven universities were selected for the study. Questionnaire along with semi structured interview with chief librarians were the tools for collecting data. The questionnaire was designed based on leading change management models and was validated using Cronbach's Alpha. The CM frame work in this research work has analysed the eight components of Change management as: Change need identification, Strategy formulation, Planning, Communication, Resistance management, Implementation, Evaluation and Change sustenance. Along with that the factors influencing the change process also have been analysed. The study claimed a significant impact of each component on CM. Among the components planning is identified as the most influencing component and evaluation as one of the least influencing and contributing component.

The study identified that a moderate level of change management is observed in the university libraries in Kerala. The weaker areas in each university have been identified based on component wise analysis of each university and redressal to make the CM process better has been suggested based on item wise analysis of each university. Among the seven universities studied, evaluation is a common factor which need improvement in the management of change.

Key words: Change management, Change need identification, Strategy formulation, Planning, Communication, Resistance management, Implementation, Evaluation and Change sustenance, Change obstacles, Change Leadership

സംഗ്രഹം

നിരന്തരം മാറ്റങ്ങൾക്ക് വിധേയമായിക്കൊണ്ടിരിക്കുന്ന ഈ ആധുനികകാലം, ഉന്നത വിദ്യാഭ്യാസ മേഖലയെയും അതുവഴി സമകാലിക ലൈബ്രറികളെയും അപ്ഡേറ്റ് ചെയ്യാനും പരിഷ്കരിക്കാനും നിർബന്ധിതരാക്കി. മാറ്റങ്ങളുമായി പൊരുത്തപ്പെടുന്നത് വെല്ലുവിളി നിറഞ്ഞതും സങ്കീർണ്ണവുമാണ്. ഗ്രന്ഥശാലകൾ പ്രസക്തവും മികച്ചതുമായിരിക്കുന്നതിന് മാറ്റത്തിന്റെ ഉചിതമായ മാനേജ്മെന്റ് അത്യാവശ്യമാണ്. ലൈബ്രറികളിലെ മാറ്റങ്ങളുടെ മാനേജ്മെന്റിനെക്കുറിച്ചുള്ള ഗവേഷണം, നിലവിലെ പ്രവർത്തനരീതിയിൽ പരിഷ്കരണങ്ങളിലൂടെയും പുനർരൂപകൽപ്പനയിലൂടെയും ലൈബ്രറികളുടെ ഉദ്ദേശലക്ഷ്യങ്ങൾ കൈവരിക്കുന്നതിന് തീർച്ചയായും സഹായിക്കും. കേരളത്തിലെ യൂണിവേഴ്സിറ്റി ലൈബ്രറികളിൽ പിന്തുടരുന്ന ചെയ്ഞ്ച് മാനേജ്മെന്റ് രീതികളെക്കുറിച്ച് പഠനം അന്വേഷിച്ചു. ചെയ്ഞ്ച് മാനേജ്മെന്റിന്റെ ഘടകങ്ങൾ പഠനത്തിനായി തിരഞ്ഞെടുത്ത സ്വതന്ത്ര വേരിയബിളുകളുമായി എങ്ങനെ ബന്ധപ്പെട്ടിരിക്കുന്നു എന്നതിലേക്ക് പഠനത്തിന്റെ വ്യാപ്തി വിപുലീകരിച്ചിരിക്കുന്നു. തിരഞ്ഞെടുത്ത ഏഴ് സർവകലാശാലകളിലെ മുഴുവൻ ജോലി ചെയ്യുന്ന പ്രൊഫഷണലുകളെയും പഠനത്തിനായി തിരഞ്ഞെടുത്തു. ചോദ്യാവലിയും ചീഫ് ലൈബ്രറിയൻമാരുമായുള്ള സെമിസ്ട്രക്ചർ ഇന്റർവ്യൂവും ദത്തങ്ങൾ ശേഖരിക്കുന്നതിനുള്ള ഉപകരണങ്ങൾ ആയിരുന്നു. മുൻനിര ചെയ്ഞ്ച് മാനേജ്മെന്റ് മോഡലുകളെ അടിസ്ഥാനമാക്കിയാണ് ചോദ്യാവലി രൂപകൽപ്പന ചെയ്തത്, ക്രോൺബാക്ക്ആൽഫ ഉപയോഗിച്ച് സാധൂകരിക്കപ്പെട്ടു. മാറ്റത്തിന്റെ ആവശ്യകത തിരിച്ചറിയൽ, സ്ട്രാറ്റജി ഫോർമുലേഷൻ, പ്ലാനിംഗ്, കമ്മ്യൂണിക്കേഷൻ, റെസിസ്റ്റൻസ് മാനേജ്മെന്റ്, ഇംപ്ലിമെന്റേഷൻ, ഇവാലുവേഷൻ, ചേഞ്ച് സസ്റ്റനൻസ് എന്നിങ്ങനെ ചെയ്ഞ്ച് മാനേജ്മെന്റിന്റെ എട്ട് ഘടകങ്ങളെ ഈ ഗവേഷണ പ്രവർത്തനത്തിലെ സിഎം ഹ്രെയിം വർക്ക് വിശകലനം ചെയ്തിട്ടുണ്ട്. അതോടൊപ്പം മാറ്റ പ്രക്രിയയെ സ്വാധീനിക്കുന്ന ഘടകങ്ങളും വിശകലനം ചെയ്തിട്ടുണ്ട്. ഓരോ ഘടകങ്ങളും ചെയ്ഞ്ച് മാനേജ്മെന്റിൽ കാര്യമായ സ്വാധീനം ചെലുത്തുന്നുവെന്ന് പഠനം അവകാശപ്പെട്ടു. ഘടകങ്ങളിൽ ആസൂത്രണം ഏറ്റവും സ്വാധീനിക്കുന്ന ഘടകമായും വിലയിരുത്തൽ ഏറ്റവും കുറഞ്ഞ സ്വാധീനവും സംഭാവന നൽകുന്നതുമായ ഘടകങ്ങളിലൊന്നായി തിരിച്ചറിയപ്പെടുന്നു. കേരളത്തിലെ സർവ്വകലാശാല ലൈബ്രറികളിൽ മിതമായ തോതിലുള്ള ചെയ്ഞ്ച് മാനേജ്മെന്റ് നിരീക്ഷിക്കപ്പെടുന്നതായി പഠനം കണ്ടെത്തി. ഓരോ സർവകലാശാലയുടെയും ഘടകങ്ങൾ തിരിച്ചുള്ള വിശകലനത്തിന്റെ അടിസ്ഥാനത്തിൽ ഓരോ സർവകലാശാലയിലെയും ദുർബലമായ മേഖലകൾ കണ്ടെത്തി, ഓരോ സർവകലാശാലയുടെയും ഇനം തിരിച്ചുള്ള വിശകലനത്തിന്റെ അടിസ്ഥാനത്തിൽ ചെയ്ഞ്ച് മാനേജ്മെന്റ് മികച്ചതാക്കുന്നതിനുള്ള പരിഹാരവും നിർദ്ദേശിച്ചിട്ടുണ്ട്. പഠിച്ച ഏഴ് സർവ്വകലാശാലകളിൽ, ചെയ്ഞ്ച് മാനേജ്മെന്റിൽ മെച്ചപ്പെടുത്തൽ ആവശ്യമായ ഒരു പൊതു ഘടകമാണ് മൂല്യനിർണ്ണയം.

സൂചകപദങ്ങൾ: സ്ട്രാറ്റജി ഫോർമുലേഷൻ, പ്ലാനിംഗ്, കമ്മ്യൂണിക്കേഷൻ, റെസിസ്റ്റൻസ് മാനേജ്മെന്റ്, ഇംപ്ലിമെന്റേഷൻ, ഇവാലുവേഷൻ, ചേഞ്ച് സസ്റ്റനൻസ്, ചെയ്ഞ്ച് മാനേജ്മെന്റ്, ചെയ്ഞ്ച് ലീഡർഷിപ്പ്, ചെയ്ഞ്ച് ഒബ്സർവറുകൾ.

CHAPTER I

INTRODUCTION

- 1.1 *Background of the Study*
 - 1.2 *Academic Libraries -Changed Environment*
 - 1.3 *Changing Role of Librarian*
 - 1.4 *Change and Forces of Change*
 - 1.5 *Reasons for Change*
 - 1.6 *Areas Where Organizations Change*
 - 1.7 *Management of Change*
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 - 1.12 *Factors Influencing Change*
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 - 1.14 *Statement of the Problem*
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 - 1.16 *Objectives of the Study*
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Chapter I

Introduction

1.1 Background of the Study

The rapidness in the creation and updation of knowledge has reflected in the radical change observed in every facet of contemporary world. Stay updated and relevant with new knowledge is the mainstay of quality education, which is the primary precondition in higher education.

Higher education has a prominent role in moulding a future society. It is a known parameter in assessing the ability of a country's competence in the global marketplace, economic strength and social well-being (Teague, 2015). By providing opportunities for advanced learning and specializations, and by supporting research and innovative activities, universities hold the central place in the higher education landscape.

Universities and higher education centres are grappling with extensive and varied challenges which arise from various sources as changing societal needs, economic forces, international linkage and technology related. In order to tackle and deal with these challenges, universities and higher education systems have to be transformed in learning and education for sustainability. For that, commitment of faculty and engagement of the scholarly community including students and learners is expected. According to LealFilho et al., (2018) "to enhance sustainability in the curricula, academics should develop collaborative approaches, and discuss how to redesign their own disciplines, and how to appreciate the epistemology and multicultural vision of sustainability, both as a topic, and as a field of education research" (p.286). In order to redesign and enhance sustainability, higher education relies on academic libraries to provide academic support and authentic instruction. Academic libraries are expected to provide timely and apposite information to the academic community to foster higher education.

The functions of a university library need to be in tune with the aims and objectives of the university education itself. According to Khanna, (1984, p.2) “a well-organized library is the *sine qua non* of the modern educational system. Education, today bereft of library services sounds like staging Hamlet without the prince of Denmark”. Academic libraries, especially university libraries who play a key role in supporting the teaching, learning and research mission of their parent institution, share this responsibility (Kreitz, 2015) of education and learning for individual development and societal upliftment. The words of Dr. S. R. Ranganathan, “libraries are not mere store houses, they are rich springs from which knowledge flows out to irrigate the field of education and culture” exhibits the importance of libraries in the arena of education and higher order of learning. To improve the quality and infrastructure of academic libraries in India, national organizations like MHRD, UGC, NAAC, NKC and various educational commissions provided important guidelines for the academic libraries in India to measure the quality of higher education (Das, 2017). Thus Libraries, considered as the ‘heart’ of university and ‘centre of knowledge’ for higher education (Arjun et al., 2010) also striving for excellence through change.

The past few decades have brought about revolutionary changes in information management activities as a result of advances in Information and Communication Technologies (ICT). Libraries may be forced to adapt to those changes in information technology for its excellence. Riggs (1997) remarked that “libraries of universities and colleges are changing faster than their respective parent institutions. Essentially everything in and around the library is changing: services, technology, organizational structure, ownership and access policies, values and most of the rest” (p.3).

Technology holds the key to the successful implementation of modernized information services provided in academic libraries (Krubu & Osawaru, 2011). The digital revolution driven by technological advancement has brought drastic and fundamental change in academic libraries. It has impacted on every sphere of academic library activity including shift from print to web media, ownership of documents to access to information and from specific libraries to digital/virtual or

hybrid libraries (Mandal & Dasgupta, 2019). This drastic change is forcing the academic libraries to adapt to the change in the information environment where a shift in the needs and expectations of academic community occupies the central position and are being detected and that requires prompt response, decisions and change (Prokopcik & Kriviene, 2013). Hence “change and challenge has become the routine for libraries and are awaiting extraordinary years of more challenges. Such monumental changes demand new roles for library and information science (LIS) professionals" (Varalakshmi, 2006, p.181).

1.2. Academic Libraries- Changed Environment:

The delicate and feeble economic condition resulting in insufficient funding amidst rising costs is always a serious and ever-relevant challenge for academic libraries. Still the changed environment has brought more challenges and responsibilities for libraries to address.

1.2.1 Communicating Value: Today, information is accessible to most and a majority consider the internet as a widely accepted resource and a universal remedy for all their information needs. Still, while considering credibility of information, the library has responsibility in providing valuable and credible information expeditiously. Establishing vetting resources criteria, creating online resources guides, conducting digital literacy programs aiming at identifying authentic information, requires expertise and supreme effort from library part.

1.2.2 Expensive and Rapidly Changing Information Technologies: Technology is growing at such a pace that disruptive technology itself has become the library's new normal. Keeping abreast of the technology is a critical challenge for libraries as it requires expertise, commitment and also requires awareness and knowledge in the concerned areas. This often creates uncertainty and ambiguity as the changed technology itself becomes obsolete as quick as a wink. Also procuring the latest technological infrastructure is apparently costly.

1.2.3 Changing User Behaviours and Expectations: The pattern of usage of information of clients is changing day-by-day and research commons and institutional repositories are becoming essential. The emergence of new disciplines

along with multidisciplinary streams of study have created a diverse and varied student population with heterogeneous information requirements.

Certainly, current trends of pandemic prevalent in the social environment has altered user requirements and interest thus made the users accustomed to use online platforms and remote access for their information requirements as well as updates. It has become a great challenge now to cater to the changed approach of information seeking of the users.

1.2.4 Change in Services: The changes in user behaviour force the libraries to change the mode of services to personalized services and web-based services rendered in the form of personalized information, online reservation, renewal and especially remote access logins to various databases owned by or subscribed by the library. The change in the usage pattern has made it obligatory for library professionals to answer user queries and assist and support them in applying the new method of information access

1.2.5 Change in Scholarly Publishing: Normally publishing is a costly affair associated with time-lag. With the revolution of information technology through the internet and digitization, the process of publishing could be done with quality and swiftly. Researchers could make their works published via pre-prints thus bringing out their knowledge to a wider scholarly community quickly and the peer community can assess its worth before its publication. Peer review with artificial intelligence has made the possibility seamless. In this situation, libraries can act as a cost-effective intermediary by proper utilization of institutional repository and library consortia.

1.2.6 Stakeholder Expectations: Meeting the expectations of stakeholders and apex bodies is a challenge for libraries as the bodies focus on the quality education and regularly verify the teaching and learning practices of universities and higher learning centres. Essentially academic excellence along with services, facilities, functions, and infrastructure of academic libraries, especially university libraries should be in par with the latest and leading standards and practices.

1.2.7 Change in Teaching and Learning Process: Student centric education system calls for a more vibrant, innovative and novel methodology both in teaching and

learning. Apparently academic libraries have a predominant role in supporting both educators and learners.

Changes in all these sectors have made it imperative for libraries to educate and equip themselves with essential knowledge and skills to handle the challenging situations.

When talking about knowledge and skill it would be the knowledge on various resources like books, journals or internet, knowledge and handling of purposive facilities and resources such as computer facilities, online provisions, websites, LANs file server etc. Also, knowledge of financial resources and knowledge and skills required to handle human resources are also crucial.

1.3. Changing Role of Librarian

The new academic environment is causing academic libraries to re-evaluate and re-structure their mission and objectives to ensure continued relevance and sustainability (Hardesty, 2002; Reyes, 2006).

In order to shoulder the changed roles of academic libraries, librarians have to move outside of their traditionally focused roles into a broader partnership with their academic institutions (Housewright, 2009). Because, "How well the librarians directly contribute to the aspects of academic life (teaching, learning, discovery, and research) valued in that institution is the basis against which the library is judged" (Nelson, 2014, p. 9). Libraries have to function in tune with the parent university so that a desirable and successful outcome is achieved for the parent university. This in turn would be in tune with the societal requirements. Information professionals must possess skills in selection, content management, knowledge management, organization of information on intranets and the internet, research services, developing and maintaining digital libraries, and bringing information resources to the desktop (Mandal & Dasgupta, 2019). Along with that technical knowledge on handling different operating systems, database management systems, content management, proficiency on different digital library tools etc. are also indispensable.

The new role remoulds the librarian from primary information inquirer to an information adviser. Hence librarians should be more competent and remain flexible

for the future technology development so as to cope up with the ever-changing environment. Librarians should have competencies required to recognize and tackle the emerging and ever-changing conditions. Competencies to identify the pattern of interaction of users with knowledge resources is essential. Excellent communication skill is another needed trait and an attitude to improve personal knowledge with the developing world around is essential. Abilities like resourcefulness, adaptability, and flexibility to provide quality services are also matters of importance. Motivation to review themselves is one of the most important quality of a librarian for updating activities.

Remarkably, from the frequent changes in the field of academic libraries, it is evident that libraries are in the path of restructuring and revamping for transcendence. Obviously keeping pace with change is crucial. As change occupies the nucleus of development, a detailed description on the change concept is necessary.

1.4. Change and the Forces of Change

Change, is a transition through which something becomes altered. Even though each change initiatives or reasons to change could be different, the inducing force to change would arise from two extremities, that is, change could be either triggered by an internal environment or forced by an external environment. These external and internal factors of change are considered as the two leading forces which cause change in any organization (Pathak, 2010).

1. 4.1 The Internal Forces to Change:

- a) Deficiency of existing system in achieving organizational objectives
- b) Change/introduction of new technology
- c) Machinery and equipment management
- d) Methods and procedures of work
- e) Work standards, personnel and organizational adjustment
- f) Inter and intra personal relationship
- g) Insufficiency of Executives

1.4.2 The External Forces to Change

- a) Economic environment
- b) Technological environment
- c) Political and Legal environment
- d) Government Policies
- e) Socio-cultural environment
- f) Operating or task environment

One cannot always consider these two forces as independent or isolated. Instead, a development or modification in the external environment can cause an updation or adjustment in its internal sphere too. That means an institution has to keep its equilibrium by balancing between both internal and external environments.

As far as academic libraries are concerned, these two forces are very much agile and instantaneous as the growth and developments in the academic arena is much more dynamic. Libraries are forced to make changes in their internal spheres as a response to change in its external environment.

Technology is one of the fast-changing external segments for every kind of organization. As a result of technological advancement, the way information created, stored, retrieved and disseminated have been changed. The advancement in ICT has revolutionized the information expectation of users and there is a drastic change in how the end user searches, uses and interprets information. Libraries have to introduce new services and roles to cater to the changing information requirements of its user. In order to keep the patronage, a deeper understanding of database search strategies and wider range of subject knowledge is essential. This demands constant updation and proper mending with expertise and proficiency of library personnel. Guidelines and suggestions from apex bodies like UGC to maintain certain standards for academic institutions ensuring quality education, (eg: NAAC, NIRF ranking etc.) thrust libraries to introduce new changes and accept new ways of operations. Correspondingly changing government policies, shrinking budgets, ever changing socio-cultural environment etc. have an impact on the internal environment of

libraries related to its vision, functions, organizational structure, organizational management, workforce, vendors, distributors, library stakeholders etc.

1.5. Reasons for Change

Swaim (2014) identified nine reasons for organizations to change which incorporated in the above said levels and types of changes. They may be furnished as:

1.5.1 Crisis: The worldwide financial crisis created many changes in the financial services industry which are imperative for organizations to survive.

1.5.2 Performance Gaps: The organization's goals and objectives are not being met or other organizational needs are not being satisfied. Changes are needed to close these gaps.

1.5.3 New Technology: Innovative advancement in technology segment which enable to perform tasks in a better, efficient and more economical manner pressurize the organizations to change.

1.5.4 Identification of Opportunities: Organizations identify the opportunities available in the market and has to grab those opportunities in order to stay relevant and competent.

1.5.5 Reaction to Internal and External Pressure: Pressure from various sectors such as users, stakeholders, global environment, change in government policies etc. force the organizations to change accordingly.

1.5.6 Mergers and Acquisitions: Mergers and acquisitions in an organization demand change in a number of segments. When two organizations are merged it may negatively impact employees as they were in dual functions and might become redundant.

1.5.7 Change for the Sake-of-Change: Sometimes change happens in an organization just for the sake-of-changing. When a new management team is on the board, they make some changes in order to prove the promptness, movability or the adaptability of the organization.

1.5.8 *Something Sounds Good:* When many leading organizations are pursuing a certain way of working, other organizations also tend to follow those practices simply because it sounds good.

1.5.9 *Planned Abandonment:* Organizations change as a result of giving up declining product, market or subsidiaries and allocating those resources into productive ventures.

1.6. Areas Where Organizations Change:

Bateman and Zeithaml (1990) in the book “Management: Function and strategy”, recognized four interrelated areas of organizational change termed as strategy, technology structure and people.

Strategy and vision changes occur when a company relocates its assets to get in for a new line/sector of business or tries to maximize its productivity with minimal costs involved.

Technological segment is the most changing area in all types of organization. As technological advancements are happening globally, organizations are required to appreciate, accept and make secure those changes for organization’s prosperity.

At times realignment of organizational structure is necessarily recommended for business success. On occasion it may alter hierarchies or job profiles prevailing in the organization.

Human Behavioural changes have an important role where change happens and is demanded. In the case of change, it is not the organizations which change, instead people in the organization have to change their mode of service, performance and effort. Human behaviour is considered as the key to successful change management

Task and Job design along with organizational culture are also proved areas where organizations change. Organizational culture is the totality of the culture of the people working in the organization which is consciously aligned with the unwritten rules which secure the success of that particular organization. The authority can attempt to make modifications to the work culture or company culture by seeking to

change the attitude and behaviours of people, in order to increase their effectiveness and thus enable them to easily adapt to the new change. Job design is how the tasks are combined to make the job complete and integrated. Task and job redesign is extremely important in many cases especially when there is a technological change. Sometimes the job redesign helps in increasing employee perception by reducing job stress without compromising productivity (Appelbaum & Grigore, 1997) which in turn boost the staff morale and leads to organizational development.

While change is an undeniable necessity for libraries and information centres, management of change is crucial and to have an appropriate methodology to introduce change management as the key for success.

1.7. Management of Change

As mentioned, the term “change” always refers to a “shift” from the existing state to a more desirable future state. This “shift” or transition phase comprises a set of operations, procedures, practices or activities involved in the process. These operations must be managed in a best suited way so that the pre-designed goal needs to be achieved. The art of managing those activities which in turn confirm success is termed as change management. “Change management is defined as a process of achieving the smooth implementation of change by planning and introducing it systematically, taking into account the likelihood of it being resisted” (Armstrong, 2009, p.34.). So “Change Management” is a systematic way to manage change and it unclogs the ambiguity while managing change.

Cambridge dictionary defines change management as “the planning and introducing of new processes, methods of working, etc. in a company or organization”. (Cambridge University Press, n.d.).

According to Prosci, change management is “the application of a structured process and set of tools for leading the people side of change to achieve a desired outcome”. (Prosci, n. d.).

In John Kotter's consultancy's viewpoint Change Management refers to a set of basic tools or structures intended to keep any change effort under control. The goal is often to minimize the distractions and impacts of the change. (Kotter, 1995)

It is vital towards dealing with change, both from the perspective of an organization and on the individual level as it is a crucial approach for the development and progress of any organization. Change management is absolutely not a new discipline with clear boundaries, rather it borrows from a number of disciplines, making the task of defining its core concepts so much more difficult (Burnes, 2004).

1.8. Rationale for Change Management

Change management was recognized as a discipline around fifty years ago. After all, scholarly studies claim that change management has a moderate level of success rate.

Several studies attempted to identify the reasons behind the low success rate of change initiative and identified that imposing change without considering people's side of change would be the strong reason behind change failure (Bareil, 2004; Callan, 1993; Hallgrimsson, 2008; Hiatt and Creasey, 2003).

Hence, in order to deal with and proceed normally with the change process, the involvement of human resources is imminent (Ploscaru & Dumitriu, 2022).

In Ashkenas's (2013) view, "The content of change management is reasonably correct, but the managerial capacity to implement it has been woefully underdeveloped." Lack of management support and resistance from employees are the reason for the failure rate to reach 70 percent. (Ewenstein, Smith & Sologar, 2015). Leadership weakness is another strong reason for change breakdown (Bareil, 2004). According to Hayes (2002,p.54.) "Change is often managed less effectively than it might be because those responsible for managing it fail to attend to some of the critical aspects of the change process".

For the implementation, the management of change must be designed and strategies should be formulated with care and vision. The concept of managing

change as single or having the bulk and rapid complexities in the change dimensions has demanded an era where swift, proper and better management of change is an emergency to exist. Managing change requires time, effort, energy and training from the part of the authority.

A successful change always ensures maximised ROI (Return on Investment). As libraries are service rendering institutions, scrutinising the success rate is not as easy as in the case of a profit-oriented business organization. Here, the parameter is the enhanced level of library services, usage and customer satisfaction.

By introducing change management, the implementation failure could be minimised. At the same time change management helps in reducing resistance to change which in turn cultivates an atmosphere that will arouse the self-esteem of the persons involved in the change process, and this will successfully impact their performance in the library activities and thus leading to organizational effectiveness and efficiency. The same also improves the communication and staff morale within the organization and in turn helps in preparing future plans of organizations.

1.9. Change Management in Libraries

Change management is crucial for libraries to concede with the expanding horizon of information. As far as libraries are concerned, if the aspect of CM is not properly considered, it impacts the quality of service rendered which ultimately leads to customer dissatisfaction. This ultimately would lead to a negative impact on the services rendered by the library and probably make a pessimistic image on the overall performance of the library. Recent researches on quality of services and facilities provided by libraries and information centres are claimed that the user perceptions are lower than their expectations

In order to disentangle the issue prevailing in libraries and information centres, cautious and forethoughtful involvement from the part of the library is decisive. The expansion of Information technology, growth of economy, transformation of educational system, learning environment, advanced scholarly

communications, widening social prestige and quality of life makes it imperative for the libraries to change for a new environment.

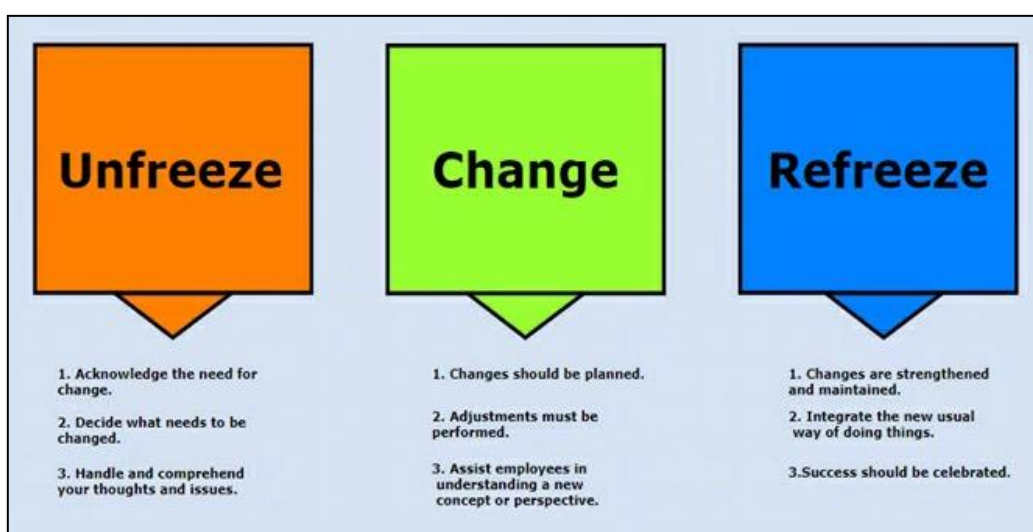
As an initiative, the investigator has made an attempt to elaborate various leading change models available and the steps involved in the change management process.

1.10. Change Management Models

The conceptual framework for effective management of change has been achieved through change models (Pathak, 2010). Change models are instrumental in the successful implementation of the change process. Some models focus on the actual proceedings for a successful outcome. On the other hand, some other models focus on the content or substance of change in an organization like understanding and analysing change. But an integrated model which incorporates different aspects of change models is widely acceptable

1.10.1 Kurt Lewin's 3 Step Model (Lewin, 1947; Mind tools content team. (n.d.)): Kurt Lewin, the well-known social scientist and physicist of that time introduced a systematic three step model to manage change, which is considered as a base model to all CM models. The model consists of three stages viz, Unfreeze- Move -Refreeze.

Kurt Lewin's Three Stage Process of Change Image



Adopted from 3 step model of change - Bing images

(a) Stage I – Unfreezing

The stage is about getting ready to change. It involves getting to a point of understanding that change is necessary and getting ready to move away from our comfort zone. Here ideally creating a situation which demands the change. By knowing the need to change, people would support change. Open mindedness and flexibility cultivation in the minds of employees are crucial here, since it is very much needed to embrace change. Understanding the benefits of change and getting acceptance of change are the two important aspects of this stage. A keen examination on older ways of thinking, working and organizational structures are also must be done to plan the change.

(b) Stage II – Move (change) or Transition

According to Kurt Lewin, “changing” is a process. He called the process transition. This is the inner-movement or journey we make in reaction to change. This stage is the implementation stage. Education, communication, time and support are the important factors to given to employees to carry out the change. Patience is a very much valued asset at this stage.

(c) Stage III – Re-freezing

This stage is about establishing stability once the change has been made. This is the stage where employees are accepting the new state and internalize change. Thus, attained change becomes the new way of working and ensured that people are not going back or revert to older ways of working.

1.10.2 Lippit, Watson and Westley Model (1958): After analysing the interpretations of change in persons, groups and organizations, Lippit, Watson and Westley (1958) expanded Lewin's three stage model, and identified three sub categories for Lewin's three stage model. They are:

1. Diagnosis of the problem,
2. The examination of alternative routes and goals
3. The transformation of intentions in to actual change efforts

1.10.3 Kubler Ross Model of Change (Ross, 1969)

In her book, *On Death and Dying*, Elizabeth Kubler Ross (1969), elaborated a grief cycle model. In this model she elaborated five stages of emotions such as denial, anger, bargaining, depression and acceptance. Even though the stages elaborated based on death of a loved one's situation, later on experts compared with the emotions of employee dealing with change and translated these five stages to employees facing change situation. These stages are:

a) Denial: It is a momentary defence from the part of the employee. b) Anger: When the reality that change is necessary is understood, the emotion of denial turns into anger. c) Bargaining: Normally in this stage, employees try to delay change or replace it with less complex alternatives d) Depression: Once the employee knew that nothing could stop the proposed change, they may feel depressed. e) Acceptance: This is the stage where all the negative emotions related to change has been wiped out and the change has been welcomed in the organization.

1.10.4 The McKinsey 7s Model (MBA management models, 2021)

McKinsey 7s Model Image

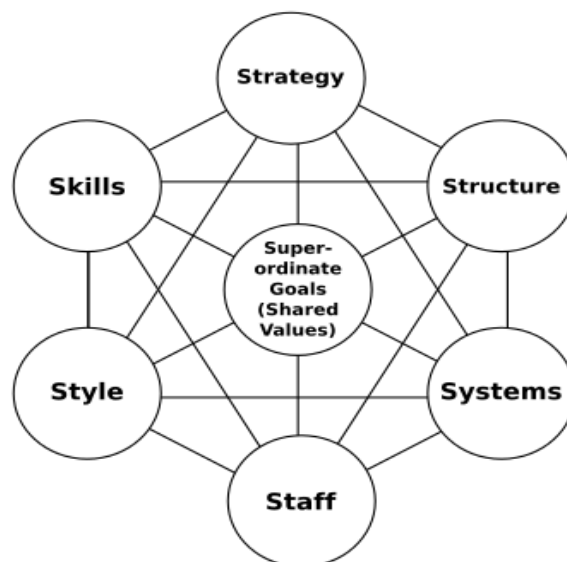


Image adopted from : Understanding the McKinsey 7S Framework | Branding Super Heroes

The model was evolved in the 1980 by the McKinsey consultants. This model is based on seven internal elements in an organization and assumes that the correct and apt alignment of these elements could yield better output in an organization. These elements are: Strategy, Structure, System, Shared values, Skills, Style and staff.

1.10.5 Kotter's Eight – Step Change Model: (Kotter, 1995)

John Kotter, in 1995 established an 8-Step Model for transforming organizations, in his book “Leading Change”. The steps are briefed below:

Kotter's 8 Step Model Image



Image adopted from: <https://www.managementstudyguide.com/kotters-8-step-model-of-change.htm>

1. Establish a sense of urgency: In Kotter's opinion, 'identification of change need' is the primary step in managing a change process. Creating an atmosphere where the desired targets are made aware of the reasons to change and the possible ways to meet it, will considerably win the support of the employees.
2. Form a powerful guiding coalition: A specialised team with apposite skills and capabilities who could do the 'change' is essential. It is the proficiency of the team assigned for change management to ensure the trust of the fellow employees and the entire staff, so that the concerns are addressed swiftly.

3. **Develop a vision and strategy for change:** Providing a proper roadmap to the success and sharing the process as well as involvement of each and every employee in the organization ensures minimised change failure. The developed strategy must go along with the mission and objectives of the organization
4. **Communicate the vision:** Communication within management and the employees is another key element in the CM process.
5. **Remove obstacles and empower action:** This step elaborates the resistance management aspect and allows implementation. The resistance could be both personal resistance and organizational stumbling blocks. If not addressed properly it would be a serious threat to the growth of the organization.
6. **Plan and create short term wins:** The tenure of change may demand a longer period. This would diminish the enthusiasm, spirit or interest of people involved in it. So, it is advisable to implement change step by step and commend each step.
7. **Consolidate gains:** The change process might be linked with numerous working units or departments and the co-operation among these units and coordination of various internal departments or segments is needed.
8. **Anchor in the culture (make change permanent):** The change introduced should be integrated in the working culture of the institution and measure must be taken to stick on to the new integrated mode of operation.

1.10.6 Prosci's ADKAR Model:

The ADKAR Model was first introduced in 1999 as an outcome-oriented approach to facilitate individual change. According to the model, effective Change Management requires control of the five key building blocks that form the basis of the Prosci ADKAR Model (Prosci, n.d.)

Prosci's ADKAR Model Image

Image adopted from <https://experianta.com/directory/concepts/adkar-change-management-model>

As per the model, individuals make changes successfully when they have the necessary building blocks like: **A**wareness of the need for change, **D**esire to participate and support the change, **K**nowledge on how to change, **A**bility to implement change and **R**einforcement to sustain the change.

1.10.7 John Hayes Theory of Change Management:

After reviewing the main features of frequently cited process models to manage change, John Hayes and Hyde developed a conceptual framework for managing change in organizations which could be applied at both individual and at group levels (Hayes, 2002). This framework has been detailed in the book “Theory and Practice of Change Management” by John Hayes. It identified five Key steps in managing change as:

Stage I: Recognize need and start change process:

The stage is all about identifying the environmental factors which demands the need to change. Here the recognition of the external events and internal circumstances is crucial for identifying the change need. Also to convert the identified need to desire, the reason for change must be made clear to the members. Encouragement and motivational strategies help in translating need to desire. Then the feeling that change is the only possible way to survive would be cultivated in the

minds of employees. And a decision on person responsible for managing change also includes in the first phase.

Stage II: Diagnosis:

Diagnosing the organization means to find out what it is that needs to be changed in an organization in order to make the desired difference.

Two subsets of this stages are i)Review the present state: means identify current deficiencies, clarifying opportunities ii)Identify the future state: developing a vision and clear future goal must be set. Other important elements come under diagnosis phase are identifying and convincing the stake holders, leaders' role in terms of creating vision, communicating the change, motivating others to change and managing personal transitions

Stage III: Plan and prepare change:

This stage refers to Shaping implementation strategy, develop a change plan, use of multiple and consistent leverage points of change, identification of what needs to be done and appointment of a transition manager (Change leader)

Stage IV: Implement the change:

This stage is where the actual change process take place. Adequate training, cultural profiling, change communication and socio emotional support to take care of those affected by change is included in this stage

Stage V: Sustain change:

This stage deals with making change stick and spreading change. Author advocates that "attention needs to be given to maintain the new state as long as it is relevant". According to this theory, change is sustained when it becomes an integrated way of working rather than something added on.

Reviewing different models of change indicates that each model has a distinct and unique approach to manage change. And each approach to CM draws attention to different aspects of the issue but at the same time they do not exclude but complement each other (Teczke, Bespayeva and Bugubayeva, 2017). One cannot

express that a particular model is the best suited model to manage change. Because selecting the most suited change model depends on considering various factors like the type, nature and amount of change required, the environment where the change is to be implemented etc. Also, different steps are overlapped and incorporated in different models.

1.11. Change Management-Basic Procedures:

Going through different models of change, the study identified the core procedures to be followed in the change process. The basic procedure involved in a change process are - to identify and assess the need for change, plan the change accordingly, implement change and accept and accommodate the new changed environment. The procedure further requires many sub processes considering factors involved, in order to carry out the change operations in a persistent way.

The first phase is focussed on getting ready for change. For that identification of the current situation is essential. And at the same time where the organizations need to be in the future also have to be visioned. Identifying the importance of a change programme and how the change impacts the organization in the future is a matter of great concern. The change strategies and actions are planned in this phase so that the 'change' needs to be secured. The second phase is the major and crucial part of Change Management, and it is the implementation of the planned changes of first Phase. CM faces challenges in the second phase of implementation. The planned approach and the roadmaps have to be adhered to in this phase, where the resistance and other unexpected issues has to be addressed. The third phase reinforces and sustains the implemented change. Action plans are ensuring that the organization is committed to doing what it requires to sustain the change.

1.12. Factors Influencing Change: When it comes to change management, the factors that impact change play a critical and significant role. The management of change is heavily influenced by elements such as organizational culture, stakeholder support, leadership, and resistance

1.12.1 Leadership in Change

Obviously “Change” is a complex reality. The most complicated issue in the change process is the handling of complex human emotions. Leadership is important in achieving extraordinary results and influencing positive change within organizations (Kouzes & Posner, 2017). A quality leadership only can achieve the emotional alignment of its people who engage in the change process. The leader who is with “Change” should have clarity of vision and ability to communicate and transmit the same to its subjects. The employees habitually look to their leaders when they have uncertainty regarding the reasons for change, how the future will look like or how to move to the new state etc. So, the leader should have the ability to influence and inspire people to get things done through them and thus encourage the workforce and bind them together to make the change a reality. These may accelerate the goal to be attained within the time limit with minimal resources and resistance.

1.12.2 Power and Stakeholders in Change

Stakeholders are influential and responsible for the change being introduced (Freeman & John, 2001). It could be an individual, group or a community they could influence the activities and functions of the organization.

In government institutions it is the government itself and its regulatory agencies act as stakeholders. In the case of universities, university authority and as the apex body. Prioritizing academic community along with sponsors and reaching in a consensus with them is crucial in management of change. For a change programme to be successful, persuading the authority and securing their sanctions are crucial.

1.12.3 Resistance During Change

Resistance is normally a common reaction to change and is a struggle to maintain the status quo. According to Zander (1950, p.10.) resistance is a “behaviour which is intended to protect an individual from the effects of real or imagined change”. But if not substantially addressed, obstructive resistance could be a threat to the growth and development of the entire organization. Usually, common resistance can be managed through education, communication, participation & involvement,

facilitation & support, explicit & implicit coercion etc. (Kotter & Schlesinger, 2008). Probably a feeling of involvement in the change process will reduce resistance. A sense that the concerns of the workforce are being heard has proved in minimizing resistance. But much caution and alert are required in the case of passive resisters as they verbally agree with change but not act accordingly. Authority would therefore have a harder time determining the source of the resistance. Still, resistance is not always a threat because criticisms and negative views always open new roads to positive debates and enable authority to re-check the feasibility of change and select suitable methods of training and education.

1.12.4 Organizational Culture

Cameron and Green (2015) emphasised the importance of culture in change management. Cameron and Green argue that a strong and supportive organizational culture is vital for successful change initiatives. An institution, where a positive culture prevails allows openness, communication and collaboration which surely will motivate employees to share their ideas and perspectives and ensures a feeling of involvement in the change process.

1.13. Need and Significance of the Study

Academic libraries-the integral part of universities and higher order learning seeks quality for being outstanding. Libraries and information centres have to redesign themselves constantly in order to deal with the continuous change that is happening in the environment in which they operate. Augmented and expanding developments in the handling of communication of information has made it completely necessary for libraries to adapt to change. With these changes how libraries collect, process, preserve and retrieve information also have been changed. Which made it imperative that a shift from past practices of manual management of library activities to automated management of library activities (Rodrigues, 2013). As change is made by people, managing people's side of change is the very essence of change management. The CM literature claims the fact that over 70 percent of change initiatives had a failure rate. In library scenario both in the state and nation, studies revealed that the perception of the users are not up to their expectation. In this context it is crucial in identifying and fixing the disparity. In order to increase the

usefulness of the library, the changes introduced in the library needs to be managed properly. The appropriate management of change would indeed help in maximising the value of the introduced change. The study tries to find out the change management practices followed in the university libraries as well as tries to identify the weaker areas which needs improvement.

The study is exploratory in nature and contributes to the management of libraries and information centres. Thus, the study is of considerable importance and value as it endeavours to carry out the need of studying the pattern of management of change prevailing in the university libraries, the perception of library professionals regarding the change management practices and propose suitable suggestions and recommendations so as to foster library services and facilities in a fast, better and latest fashion.

A serious review on change management literature revealed that the majority of studies have been conducted at business and profit oriented institutions. Hence, the study depicts the uniqueness of the attempt made by the researcher, which aims nonprofit, service-oriented sector. The literature review indicates that there is no such study conducted in this way to determine the ability of university libraries to manage change in the operational environment especially in Kerala. Therefore, this particular work provides an initial innovative approach for the valuable inputs regarding the employee perception on CM practices followed, leadership, changing internal and external spheres of library, employee resistance factors, and communication pattern during change in a service-oriented aspect. It is expected that the result of the study would enable the library to identify the weaker areas of change management and rectify the same. It also helps to design a conceptual model for management of change in academic libraries.

1.14. Statement of the Problem:

A clear and unambiguous statement of the problem is required to achieve the apt objectives, conclusions and output of a study.

A university library is certainly considered as the heart of the university education system. In order to shoulder this responsibility, the university library system has to renovate and recondition itself regularly. Libraries are changing in

every aspect of its activity. The reflections of ICT advancement are seen in every fragment of library operations. The format of resources, mode of services, facilities required are changing. The entire library environment is changing. At the same time literature claims that majority change initiatives fail to yield the desired output because of the improper handling of change. Which indicates Proper management of the everchanging library environment is the pressing priority. Keeping this in view the problem of the study is stated here as: “**Change management of university libraries in Kerala**”.

1.15. Definition of Key Terms

1.15.1 Change Management: Cambridge dictionary defines change management as “the planning and introducing of new processes, methods of working, etc. in a company or organization”. (Cambridge dictionary, n.d.).

1.15.2 University Library: Librarians glossary defines university library as a library or group of libraries established, maintained and administered by a university to meet the needs of its students and members of the academic staff.

1.15.3 Kerala: The southernmost state of India formed 1st November, 1956 with the integration of Travancore Kochi state and Malabar. Its area is 38,863 Kms and population of 31 million. (Manorama Year Book, 2015)

1.16. Objectives of the Study

1. To identify the level of change management practices followed in the university libraries in Kerala.
2. To identify the internal and external factors influencing change in the university libraries in Kerala.
3. To identify the level of change obstacles present, as well as the most critical obstacle which resist change in the university libraries in Kerala
4. To study the communication pattern prevailing in the university libraries in Kerala during change process.
5. To study the leadership during change in the university libraries in Kerala

1.17. Hypotheses of the Study

In order to accomplish the above objectives, the study arrived at the following assumptions on the basis of theoretical guidance and prior evidence - which is considered as the hypotheses for the present study.

1. There is a university wise significant difference in the change management practices followed in the university libraries in Kerala.
2. There is a gender wise significant difference in the change management practices followed in the university libraries in Kerala.
3. Both internal and external factors influencing change have a significant impact on change management
4. There is a university wise significant difference in the change obstacles which resist change in the university libraries in Kerala.
5. The communication for change across different libraries in the universities in Kerala are significantly different
6. There is no significant difference in the leadership observed across university libraries in Kerala during change.

1.18 Scope and Limitation of the Study

The present study is analysing how changes are managed in university libraries in Kerala based on the proven CM framework. Here the investigator tries to identify the employee perception regarding management of change based on eight core change management phases.

The reflections of enormous, unstoppable and immense change happening worldwide have impacted libraries and information centres too. Rapidly changing technology, change in the resource format, change in scholarly communication change in user behaviour and demand etc. made appropriate handling of change indispensable. Majority of the change management studies were conducted in the management sector with a customer point of view. Where the focus is on profit maximisation in monetary terms. Comparatively very few studies were carried out in Libraries and information centres, where the output is value based. So, such a study

would surely help the library authority to lead and better manage the ever-changing nature of the information centres, and thus serve the academic community to its optimum level.

The Scope of the study is confined to seven prominent state university library systems in Kerala. The university library system normally consists of one central library and several departmental libraries. The university libraries were selected based on their year of establishment and number of employees working in these libraries along with well-developed library system. The entire professional staff from these seven universities, working at different levels were taken for the study. The present study is conducted with a sample of 266 professional employees working in the university library systems. And special interviews with librarians were also conducted.

Since the subjects were all employees working at different levels, they tend to answer their queries from specific contexts of their positions rather than from a holistic perspective. As the user point of view regarding the usefulness of library in terms of the library resources, services and facilities etc. have been studied earlier by many researchers, this particular study observes CM from library professional's perspective only. Hence the user aspect of CM is not considered. The study does not consider the factors as stake holders and organizational culture in the organizational environment in this study. The researcher is a working professional in one of the university libraries, but it does not influence the study in any way.

Even though the study has the above limitations, the investigator wishes to note that such limitations are accommodatable in these sorts of studies and assures that the investigator has taken all possible measures to make the study as faultless and accurate as possible.

1.19. Outline of the Thesis

The entire study is organized in five chapters. The Appendix and bibliographies are included at the end. The chapters are organized as shown below:

1.19.1 Chapter 1: Introduction

This chapter discusses the theoretical background of the study. It discusses the challenges of universities and higher education centres. Also challenges and changed role of academic libraries and library personnel, change management framework, the need to manage change and change management models. Based on the models, the chapter concluded key steps in the management of change, need and significance of study, objectives of the study, hypotheses of the study, scope and limitation of the study and organization of the theses.

1.19.2 Chapter 2: Review of Literature:

A detailed review of related literature which was conducted in India and abroad is included in this chapter. Literature review helps a study in identifying theoretical background, status quo of the topic under study, methodologies, problems identified, unexplored areas of topic under study etc. Which enables the investigator to attain clarity of vision and right perspective.

1.19.3 Chapter 3: Research Methodology:

This chapter describes the methodology used for the study. The variables, tools, population, samples etc, are detailed here. The data collection procedures and statistical techniques for analysis are also discussed here.

1.19.4 Chapter 4: Analysis and Interpretations:

A detailed account of the analysis of the data collected and interpretations of data are presented in this chapter.

1.19.5 Chapter 5: Findings Suggestions and conclusion:

This chapter is dedicated to discussions on major findings and conclusions of the research problem. Tenability of hypotheses, suggestions and recommendations are also included in this chapter.

1.20 Conclusion

Libraries and information centres aim at quality services to its clients. Recent studies and trends show that the quality of services rendered is lower than the expectation of clients. A cautious and serious involvement from the part of the library community is needed to restructure and redesign the existing pattern to meet the gap between the services rendered and ever-changing user expectation. To manage and handle the frequent and rapid changes occurring in the library environment, change management is essential and decisive.

So, the present study tries to understand the existing change management practices observed in the libraries and various factors influencing the management of change.

The findings will help in understanding university library's ability to manage change and identify areas of management where improvements are required. Hence a better management of change could be achieved so as to reap better results.

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Chapter 2

REVIEW OF LITERATURE

2.1 Introduction

2.2 Change

2.3 Change Failure

2.4 Change Management

2.5 Ability to Manage Change

2.6 Change Models

2.7 Libraries and Management of Change

2.8 Leadership

2.9 Resistance

2.10 Culture

2.11 Conclusion

References

2.1 Introduction

Literature review gives background knowledge to any research work and also helps in giving overview of the subject under study. A systematically arranged literature review is essential for critically examining the topic under study and makes sure that the study has not been done in the particular area and it gives supportive information to the topic under study. The purpose of this chapter is to review the essential studies which gives back ground and support to the present topic under consideration.

Change management is a growing area of interest in many research studies. Recent trends show a lower level of success in the change initiatives which makes proper management of change a necessary. Accordingly, each and every step in the change management process has its own value and relevance. There is an abundance of literature on management of change and the factors influencing the management procedure. As well as many well-known and leading experts run their own blogs and publications on the topic, on various change models, practices etc. Majority of these studies in change management have been performed in management and business institutions whereas comparatively a smaller number of studies have been seen in the area of library and information science field. Hence effort is made by this study to identify the practices followed in the university libraries in Kerala to manage change.

The reviews have been selected from various databases like Science Direct, Web of Science, Emerald, ICSSR, ERIC, JURN, OPEN ETDs, Digital Libraries like JSTOR, SCOPUS etc. Also, several search engines like google scholar, CORE as well as Shodhganga and Shodhsindhu etc. have been consulted.

This particular chapter offers a detailed account of some relevant previous studies, the processes, procedures and the methodologies adopted by earlier researchers under the study area and examines the interpretations and conclusions they reached. The study categorized under the following headings

- Change
- Change failure

- Change management
- Ability to manage change
- Change models
- Resistance
- Libraries and management of change
- Leadership in change
- Culture in change

2.2 Change

Change is an inevitable part in any field of action. Existence of any system without change is unimaginable. Hence it is an ever-present feature of an organizational life both at operational level and at strategic level (By, 2005). Change is a commonly and instinctively occurring movement in organizations. Ganta and Manukonda (2017) in their article titled “Leading the change in the organizations” have identified change as a naturally occurring activity in a growing organization and pointed out that there are consequential factors which force the organizations to change. Further the article discussed various changes in an organization and identified downsizing, relocations, restructuring, technological changes, mergers, process-oriented alterations and people-oriented matters are common factors which force organizations to change. Furthermore, the study detailed various leadership styles and qualities the leaders must possess while dealing with change.

In the management literature, ‘change’ is identified as the key element in the success of an organization's goal. Michael and Shandra (2016) discussed the importance of organizational change and development. The study stresses that “Organizational change and development are essential to make an organization grow and adapt with its given market”. The work detailed the benefits of organizational change and development, how it impacts the employees and how leaders play a role in the change process. Survey method, interview and literature review have been used for collecting data for the study. They pointed out that organizations need to evaluate employee skill sets and take necessary actions if any new learning is required to handle the changed situation. They argued that changes in an organization

occur due to technological factors, social issues and political standings at a given time.

Every change to the status quo has a purpose or a cause. The purpose is always focused on a better state. Chen, Suen and Lin (2008) described causes behind organizational change. Investigators used Van de Ven and pool's teleological theory, life cycle theory and dialectical theory to explain the reasons behind organizations change. According to teleological perspective the ideal state is achieved through a continuous process of goal setting whereas life cycle theory believes organization as an entity which depends on external environment. But dialectical theory states that when a particular force dominates over others, a new value or organizational goal is established. Thus, organization change happens. The article further elaborates the common targets of organizational change as vision, strategy, structure, culture, system, production technology and leadership style. Finally, the article concludes by claiming that education, communication, participation and involvement are active ways to gain support towards change. The literature reveals different aspects of change as described by different authors. In this respect, Adipudi (2018) considered change as "harbinger of organizational culture maintaining competitive advantage of an organization" also considered as the "best thing" for the company. Even through the dialectical viewpoint or teleological perspective, if a change happens there probably would be a process of change where identifying the need to change is prime.

'Identification of change need' demands thorough environmental analysis. The environmental analysis includes both the internal and external environment of the organization. Nadina (2011) stated that the change process in an organization begins when the authority identifies the opportunities present in the environment to perform better. Which indicates that identifying change needs is the prime step in the management of the change process. Further the study discussed the methods of identifying need to change and classified the factors which create the change need. The author argued that both internal and external factors together could create 'change need'. The factors the study identified and detailed are employees, organizational structure, informational system, quality of management,

organizational culture, economic factors, political factors, legislative factors, technological factors, socio-cultural factors, demographic and ecological factors. The author stressed that among these factors, the manager must identify the key factors which influence change in their particular institution. And further stated that a thorough and prolific environmental analysis will aid in identifying change need.

Research indicates that change is necessary for an organization to succeed. Since change is essential to an organization's success, understanding the reasons behind it is crucial. Studies claimed that identification of change need is the initial step in the change process.

2.3 Change failure

Many research studies assert that more than half of change management initiatives fail. Dickson (2019) pointed out that over 70 percent of change initiatives fail. In the article "Changing change management", Ewenstein, Smith, and Sologar (2015) also indicated a 70 percent failure rate of change initiative. It is very pathetic that even though money, time and energy are invested and change initiatives still fail. This causes great loss and damage to the organization.

In the case of libraries where budgets shrink and user demands increase tremendously such a failure situation is harder to bear. In this scenario it becomes very much important to analyse the causes behind the failure of management of change and make necessary realignment and restructuring so that the failure instances would be minimized.

In order to identify the reasons behind the change failure many studies have been conducted at various fields and at various levels. Dickson (2019) tried to analyse the reasons for the change failure and the measures to overcome the stumbling blocks. He pointed out lack of leadership capabilities, organizational inertia, lack of tools, lack of vision and communication as well as resistance are the reasons behind change failure.

In a study, Markovic (2008) attempted to find the causes of the failure of organizational change. On the basis of a number of examples, he argued that joined

ventures, alliances or other kind of partnership bring substantially higher level of market values. According to the investigator, organizational inertia is the most important obstacle for change. Apart from this, absence of change champion, lack of senior management support, poor management skills, one dimensional solution, change team diverted to other projects and poorly defined organizational objectives also recorded in the failure cause list.

In this regard, Mosadeghrad and Ansarian (2014) conducted secondary research by analyzing the literature published between 1980 and 2011 to identify the reasons for failure of change management. The investigators used both qualitative and quantitative methods to get the apt result of the study. By applying a meta-analysis approach, the researchers tried to figure out the important barriers to successful change programmes. According to the scrutineers, Insufficient education and training, employee's apathy, inadequate management support, poor leadership, inappropriate organizational culture, inadequate resources, poor communication, inadequate planning, insufficient customer focus and lack of monitoring and measuring system are the barriers in the path of transitioning.

In this scenario a study conducted in the university libraries in Kerala holds some relevance. The study was conducted by Haneefa and Aswani (2017) on the quality of e-services of university libraries in Kerala. A SERVQUAL questionnaire with five-point Likert scale was used to collect data. The study revealed the fact that the e-services of university libraries in Kerala are not up to the expectation of their users.

All these reasons pointed out that the failure rate in change initiatives needs to be addressed with utmost importance. This elevated failure rate may indicate a lack of a valid model for managers to successfully implement and manage organizational change (ManCheung, 2010).

There should be no doubt regarding the importance to any organization of its ability to identify where it needs to be in the future, and how to manage the changes required getting there (By, 2005). Since organizational change is critical for the success of an organization, its management highly requires outstanding managerial

skills to thrive in the current sector of endeavour. Hence, managing change further has a line of business which is focused to be result oriented. Thus, a detailed study regarding the methods of managing change and the ways and means to attain it with minimal threats and obstacles in the journey of change is crucial.

In conclusion, a great deal of research examined the causes of change failures, and a smaller number of studies made use of bibliometric analysis to identify the causes of failures. Research commonly identifies organizational inertia, lack of leadership, lack of vision, insufficient training, and lack of education as the cause of failure. A few research have indicated that the primary reason for change failure is the absence of a valid model for managing change.

2.4 Change Management

Change management is the systematic way of managing changes which happens in an organization. Studies claimed that proper application of change management practices have improved their success. As the study is intended only for service sector, the success cannot be evaluated on the benchmark of monetary benefits but in the successful service rendered either of user satisfaction or customer contentment. In order to prove the benefits and results obtained through the implementation of a process of managing and controlling change, a study was conducted by Andrade et. al. (2016) in the IT environment of a large government company in Brazil, the investigators initially defined that any change in the IT environment must be requested. Then categorized each change request the company received under three levels which are: Routine or standard change, planned change and emergency change. And the changes are formally managed through the integrated control process of change. For this investigator used a form for 'change request' to be filled, which covered all the primary details needed for the change implementation process. The request was subjected to scrutiny for categorization and feasibility before approval. After the implementation, a post implementation form also used to assess the change. In order to measure the results of the integrated control process changes, created a performance indicator (KPI) to monitor and improve the process, using practices of continuous improvement. One of the

important results the researchers pointed that the communication process has improved a lot. The authors argued after adopting this formal way, the results have been tremendously increased. The result showed 91.5% success rate. The scrutineers claimed the changes have achieved their goals almost entirely. In this respect, the proposition of Khan and Kamal (2015) is to be agreed that, the investigators strongly argued that “Change management is the only feasible solution to overcome all the difficulties and problems” arising in academic libraries over time. The researchers identified four major areas of change such as quality, marketing, cost and technology. According to the authors, in order to make successful changes in these major visible contents, libraries need to change in three other less visible aspects such as strategy structure and human resource management. The study indicated strategic vision and strong leadership are the inevitable elements in bringing in desired change. According to the authors the vision and values of libraries must be evaluated and redesigned on the basis of critical success factors.

Many studies argued that adoption of change management methodologies have improved the performance of the workforce. Archibong and Umar (2021) in a research study conducted in Nile university pointed out the same fact. The research was designed in a descriptive survey method and adopted Burke Litwin model of organizational change. The study utilized a stratified random sample method for selecting samples and a five-point Likert scale advantage utilized in getting data in the questionnaire. Further data was analyzed with regression analysis. And the result showed that change in the organizational structure, leadership change and technical change has a significance on quality of employee service delivery. Finally, the study manifested that human resource is the important internal strength of an organization and hence recommended organizations to properly communicate to its workforce to minimize resistance.

Studying change from both authority perspective and employee perspective would help in identifying where the gap between authority expectation and employee performance would occur and address the same. A study was conducted by Bishtawi (2014) on change management practices in the telecom sector in Palestine. Through this study the researcher tried to find out the main problems that Palestine telecom

sector faces through the process of change from manager's perspective and from the employee perspective. The researcher utilized both qualitative and quantitative research tools. Questionnaire was used as a quantitative tool and the data obtained have been analysed with the help of the SPSS programme by using a one-way ANOVA test. Interviews were used for qualitative data collection and which were analysed with the help of thematic analysis. The study found that the communication channels were not effective enough during change. Another finding was that resistance was the biggest problem the telecom sector was facing during change and fear of ambiguity and fear of losing jobs were the prime reasons for resistance. But lack of efficiency of the change leader's role caused poor resistance management. The research work also identified that the training was not effective and supporting roles from the top management was found weak. Finally, the study proposed a change management framework in order to manage change in the telecom sector in Palestine. This model consisted of four main stages which are: change planning, change management, change reinforcement and getting feedback. Through this proposed framework the change occurring in an organization could be better managed.

The approach taken to managing change is crucial for its success. A research work conducted on change management in the public sector by Selvadurai (2013) tried to pick out the strategies needed to be adopted so that the change could yield the focused result in the public sector. The theoretical framework of the study was based on John P Kotter's eight step model of change management. The study followed a qualitative research design and in-depth interview method was used for data collection. For the purpose of data analysis, a generic form of analysis was used where themes could be extracted from responses that have been utilized. And the study found that three of the eight steps in Kotter's model were in alignment in the public sector under study, which were forming a powerful guiding coalition, creating a vision and communicating the vision.

A Similar study has been conducted by Omitto (2013), and the investigator tried to find out employee perception of change management with special reference to Kenya commercial bank, Nairobi County. A sample of 60 respondents that is, 5

percent from Kenya Commercial bank was selected using stratified random sampling method. Primary data was gathered through a semi structured questionnaire. Data was analysed with the help of means, standard deviation, relative frequencies and percentages. Study identified certain great factors which affect change management in Kenya commercial banks as leadership, communication, organizational culture change agents and employee attitude towards change. Study further suggested that to make change management successful in Nairobi commercial bank, it is essential to increase employee participation and involvement in the change process and this would minimize resistance to change. As the study suggested, considering the human element in the management of change is an important aspect of change which needs cautious consideration.

The literature undeniably shows the importance of managing people's side of change during transition. A case study was conducted among the Employees of the South Australian Tourism commission (SATC) by D'Ortenzio (2012). The main focus of the study was to understand employees' perception regarding change and change management practices within SATC. The factors influencing change and how these factors affect employees were also studied. An attempt was done to analyse employee understanding regarding resistance to change and reasons behind that. The role of managers and communication in the change process was also subjected to study. Data collected through informal and formal Interviews. The understanding of employees is briefed as: Change was a complex process, Change was not easily understood by all employees at all levels, Confusion regarding requirements and purposes sometimes causes negativity. Positive skilled managers make the change process easier, Employee participation is greatly influenced by those leading and managing change, Good communication would be the key to success of change process, Strategic direction commitment and communication were expressed as expected behaviours for change managers as well as employees seek 'humanity approach', commitment, skill and clarity in their role as managers. Further the researcher developed a four-step model of change management for SATC. Where the first step was effective introduction and communication of the change the subsequent

step would be execution and implementation of the organizational change. Managing environment change was the third step and sustaining the change was the final step.

Numerous reviews on the change literature assert a connection between change management and several other elements affecting change. Study by Ryckebusch, (2017) in the HR department of the Anheuser-Busch-InBev's company, the researcher aimed to identify the relationship between change management, human resource transformation and the impact of communications during these transformations. The study identified three key issues: insufficient planning, employee reported poor communications, and low perception of usefulness in the company. Analysis identifies four key variables that have the most impact during transformations: planning and analysing beforehand, prioritizing quality, identifying change agents and communicating the change. The study strongly argues communication as the key to success needs to be nuanced. Deeper dedication and cent percent involvement from the part of the workforce probably help in transforming human resource and motivation has a key role in inspiring them towards positive outcomes.

Impact of change on employee motivation case study conducted by Sidikova, (2011) at Cargotec Shared Service centre (CSSC) raised the question whether planned change impact employee motivation- if so, how it effects and ultimately made an effort to enquire what needs to be done to motivate employees towards successful change. Survey method with open ended questions, including observation and interview with managers used to collect data. Target group for the survey was the CSSC site in Finland, around 80 employees. The finding of research arrived at a judgement that the success of the change programme very much depended on the emotion of the workers. Research findings proved the assumption that change impacts employee motivation. The study identified Communication techniques and sociological management approaches are able to change the mood of the organization.

Kettunen and Chaudhuri (2011) aimed to present a general conceptual framework of knowledge management to promote organizational change and competitive advantage. The framework integrates strategy with change management

and presents useful tools of change management. The authors borrowed the words of earlier researchers in order to confirm that the effective change process through a strategic management approach may take any of the forms as command or decree strategy, specialist or professional strategies, consulting or bargaining strategies, educative or learning strategies, and involvement or member-ship strategies. The study identifies six elements of change management as the reason for initiating change, nature of leadership required for the success of change, correct gauging of the focus of change, outlining the implementation process, reward system and use of consultancy services in the change management process. The authors strongly advocated the need to assess the environment beforehand for the success of the change program. The study concluded by stating that “Knowledge management aligned with strategic management and change management is the most successful tool for building business competitiveness”

In conclusion, the majority of studies on change management took into account a variety of variables that affect CM. Numerous research have been done on the real-world applications of change management. In these kinds of investigations, assessments were done both before and after the change. Several studies examined the relationship and impact of CM on a range of variables, including communication, motivation, and resistance. Studies have taken into account the viewpoints of employees and authorities.

2.5 Ability to Manage Change:

The management must possess a certain set of specialised skill sets and talents in order to manage change in the right way and produce the intended outcome. At the same time for the purpose of dealing with changes, organizations must adapt, and for the change process to proceed normally, the involvement of human resources is needed (Ploscaru & Dumitriu, 2022). Bobiak et. al. (2009) introduced psychometric properties and developed a quantitative measure of capacity of change for use in primary care settings. For the purpose the researchers have reviewed previous conceptual and empirical studies and generated 117 items on organizational structure, climate and culture. These items were tested for its validity against 15

primary care practices. The investigators used Distributional statistics, pairwise correlation analysis, Rasch modeling, and item content review. Reliability and convergent validity were assessed and identified 25 items are highly valid with 95 percent

Measuring the organization's ability to manage change was an innovative experiment by Solberg et al. (2008). The experiment was on 41 medical groups on assessing their capability to improve care. The researchers identified 12 experienced and successful members from the medical group. By interviewing these members and also with the help of literature review, the researchers drew 87 organizational factors and 25 strategies which are crucial for the success for the management of change. These items were further modified with the help of Delphi method. Based on this constructed a Change Process Capability Questionnaire (CPCQ) in relation to depression improvement and correlated it with organizational factors. The investigators used a five-point response scale and found that there were high variations on nearly all CPCQ items. The team also found that the total CPCQ score correlated highly with organizational priority for depression improvement and with presence of overall systems for depression care.

The management capacity of change very much relies on the selection of appropriate approaches to change. Rowland, Thorley and Brauckmann (2023) described the most successful approaches to lead organizational change. The probers detailed a change - approach frame work. The framework lists the following four approaches: Masterful, Emergent, Directive and Self-assembly. The authors believed that masterful and emergent approaches have a higher success rate based on their years of experience. Nevertheless, choosing a change strategy requires careful consideration and deliberate participation in order to succeed in the change management process.

In summary research has been done to determine an organization's capacity to handle change in its operational surroundings. Various contexts led to the development of various instruments to evaluate change management proficiency. The instruments were created using prior research and empirical studies as a foundation.

Following validity and reliability testing, the instruments were standardized to evaluate CM from relevant angles.

2.6 Change Models

Whenever a change is initiated, the organization or the establishment traverses through certain known steps from the initiation till the completion of the proposed change initiative. Here reviewing studies which were based on several leading models to manage change and comparisons done by previous researcher on different models.

Teczke, Bespayeva and Bugubayeva (2017) detailed different models to manage change. In the article the scholars discussed about various models to manage change starts from, Kurt Lewin's three step model then further elaborated about various other models like Kotter's eight step model, findings of Aladwani, Meyer and Rowan, Nadler's model, Force field analysis, ADKAR model, EASIER model and also examined various approaches to change. Further studied the difference between these models and concluded that it is impossible to choose a best method or approach to manage change as "each approach concentrates on different aspects of change at the same time they do not exclude but complement each other".

Kazmi and Naaranjoa (2014) studied various models of change management to finalize a better suited criteria to change. The study attempted to help managers in selecting best suited transformational criteria from the models of change available in massive amounts. The study was conducted based on the OSUVA project. The OSUVA project was a health care change initiative by the Ministry of health, North Finland. The study supported the selection of the ADKAR model as one of the best to deal with OSUVA conditions. The authors used open ended questions, informal interviews and group discussions for the study. A comparative analysis was also done for the investigation.

Kritsonis and Hills (2005) has compared various change theories. The investigators compared characteristics of Lewin's three step change theory, Lippitt's phases of change theory, Prochaska and Diclemente's change theory, Social cognitive theory and the theory of reasoned action and planned behavior to one

another. According to the study Lewin's model is very much rational and goal oriented but it does not consider the personal factors which affect change. The article found that In Lippit, Watson and Westley's theory as an extension of Lewin's theory, and detailed the eight steps involved and pointed out that this model focuses more on the role and responsibility of a change agent rather than change itself. Further elaborate the Prochaska and Diclemente's change theory, which is a spiral model where individuals have freedom to exit at any time of change and they can revisit the contemplation stage and prepare for action in the future. According to the author, the social cognitive theory propounded that behavioral change is affected by environmental influences, personal factors and attributes of the behavior itself.

Pryor et al., (2008) elaborately described certain important and existing models of change, which include: Action Research model, Lewin's model, Schein's extension of Lewin's change model, Lippit, Watson and Westley's Expansion of Lewin's change model, Kotter's model, Jick's model Mento., Jones and Dimdorfer's model and Shields model. A circumstantiated comparison and critical analysis of these models have been conducted and strongly argues that in today's world of constant, complex change, organizational leaders who react rapidly and responsibly are successful. The organizational leaders who anticipate and invent the future are even more successful because they are the leaders in their organizations and their industries. The organizations that do not survive are those that are led by people who fail to invent the future. Finally the study suggested a relatively new strategic management model - The 5P's Model. The five elements are purpose, principle, processes, people and performance. If these elements are in place and in a state of continuous re-aligned, the organization can be transformed and transforming. The authors strongly recommend this model most suited for today's competitive and complex business environment which leaps towards the future. The 5P's Model can be used to strategically and tactically manage an organization as organizational leaders respond to change and invent the future for the organization and the industry.

Tracey and Blood (2012) attempted to find out how the McKinsey-developed 7-S model can be used to assess a company's competitive and strategic position. The study conducted on the Ithaca Beer company detailed the McKinsey seven S model

and described that in 7-S model the seven elements should be in alignment. The seven elements described as strategy, structure, system, staff, skills, styles and shared values. The study was conducted based on personal interviews, secondary source analysis and semi structured interviews and concluded that four of the seven elements which are: strategy, staff, skills and shared values in Ithaca beer company are in alignment and critical for the success.

After analyzing leading change models, namely ADKAR, Lewin's, Kotter's 8 steps, and Mckinsey 7s models of change, Sheikh (2021) concluded that, despite some differences between the mentioned models, they have common factors which are dividing change management process into consecutive stages and considering the importance of human resources side in the change process.

ManCheung (2010) tried building an integrated change model in a project management context. In order to construct such a model, the investigator integrated widely cited change models and the trans theoretical model (TTM). The researcher opined that the common steps of cited change models focus on action steps to make organizational change. Whereas TTM focused on the action steps to make change in human behavior. The widely cited change models were selected with a criteria that these models may be cited by at least four out of 13 selected journals. And the integrated change model in project management (ICMPM) was created by clubbing the widely cited change models and five project management process groups, which are-initiating, planning, executing, monitoring and controlling, and closing. The output was the development of a 13 step Integrated change model through merging the ten common steps of six widely cited change models with the TTM.

Upon examining the literature on various studies pertaining to a range of change management models, it is noted that these studies examined leading change management models and many studies devised specialised models for their specific context. Even though some minor variations are noted, all of the models reviewed share a fundamental process that contributes to successful change achievement. Going through these models gives an idea about the concept of overall change

management process and practices and the priorities involved while following each model

2.7 Libraries and Management of Change

The focus of the present study is the management of change in university libraries. University libraries are academic libraries which cater to the needs of the research and academic community. The variety, types and the dimensions of changes in the libraries are growing day by day still have some common characteristics. A clear understanding of the changes, and the approaches while dealing with change needs to be recognized.

The change management procedures of academic libraries were studied by Gunapala (2017). The study aimed to explore the change management practices employed and the future directions of Australian university libraries from the context of change, leadership and technological complexities. The study investigated the effectiveness of change management practices and the role of leadership in Australian university libraries within an environment of ongoing transition in technology, funding, needs of clients, and university teaching, learning and research. This research uses the inductive qualitative constructivist approach. For that the researcher interviewed the chief librarians of Australian public university libraries with in- depth open ended questions on four themes -change, technology, leadership and human resource development. The research pointed out three main contributions. Firstly, some university libraries seem to be very active in changing and integrating new technology and expanding their areas of activities into one which were once considered-non-traditional activities of libraries. Secondly found a paradigm shift in university libraries in collection development, services, policies and practices, the changes to virtual libraries, required new skills among library staff. And also, the shift in management and communication with new and old stakeholders. Thirdly, based on the research, a model for effective change management in the context of university libraries has been made. The investigator argued that due to the increase in market forces and advancement in ICT, the recruitment policies of librarians need to

be modified with new knowledge and skills to meet the changed needs of the digital environment.

Midda et al., (2009) indicated that the changes taking place in the academic libraries are much faster than its parent organization. Everything including technology, organizational construct etc. are changing. Still financial and technological constraints are the concerns of the majority of libraries in India. The authors presented Change Management as a panacea to achieve change at different levels in academic libraries. The study gave a detailed description regarding change, change management and changes in libraries. And shed light on certain important elements to achieve change which were as follows 1.proper planning 2. leadership 3. management and support 4. Effective communication 5. Recognition and response to resistance 7. Follow up evaluation and learning. The study concluded by emphasizing on the most important element which is the “User” element. Further stated that the poor handling of the user element would be the biggest hurdle in achieving a successful change. And so library professionals should be equipped in such a suitable way to better serve the user.

Dadzie & Mensah (2022) studied how the rotation of staff has been carried out in the university of Ghana library systems. The study adopted a qualitative research technique. The study utilized in-depth interviews in both pre and post transfer process. The investigators created an open platform for interacting with staff. The interviews were audiotaped and were transcribed to verbatim then analyzed manually using hand coding. The findings emphasized the importance of communication, a systematic procedure, and transparency in making change simpler and smoother to execute.

A research study conducted at the Vilnius university library by Prokopcik & Krivine (2013) has considered proposed ‘change’ as the important factor in planning the future of academic libraries. The main aim of the study was to ascertain some most significant aspects of academic library activities. Based on previous research studies, the work forwarded the changed role of academic library as - open access promotion, managing research data, creation of new library cooperation and

partnership as well as research support. The article was motivated by the establishment of a Scholarly communication and Information Center (SCIC) at Vilnius university (VU) library. And argues VU contributes to the idea and practical implementation of -open access, collaboration with other academic communities in the projects of research data management, taken an active part in carrying out bibliometric research, and helped to form a range of research support services, thus promotes library's scholarly research and contributed in enhancing library's research potential.

The impact of several factors on change management was the topic of discussion in many research studies. Such a study in the library and information science discipline was done by Ruchi (2016). The researcher conducted the study on Change management and motivation for transformation of library and information services in the present era of university libraries of Delhi, Haryana and Punjab. Questionnaire was used to conduct the survey. A five-point likert scale was used to analyse the data. The formulated hypotheses were tested by statistical software SPSS and MS Excel using Statistical techniques like frequency distribution (Histogram in Excel), correlation, coefficient of variation, ANOVA (Analysis of Variance), and F-test. The study considered development in IT, changes in scholarly publishing, changes in the pattern of global education as the background of changes which occur generally in the field of library and information science. According to the study "Change management" in libraries was the only practical solution to overcome difficulties and problems being created in an ever-changing environment to ensure its all-round development and growth. The study recommended a share-and-collaborate style rather than a command-and -control method to succeed in the change process. It was also suggested that the professionals should be more transformational to lead and inspire their colleagues throughout the change process and revealed that motivational factors are much a dependent factor in employee involvement and commitment thus the success of the change process.

How the external and internal factors influence the management of change was the investigation of Aswath and Reddy (2011). The research was focussed on academic libraries. The investigators identified eight key areas of change in libraries

which develop as per the requirement of the user community, the staff and the parent body. The identified 8 factors are: 1. Administrative operations 2. delivery of services 3. Format of information collection 4. staff attitude 5. Technological changes 6. Professional Practice 7. user Education and 8. work hours. A case study of Alliance university library also mentioned here. When the routine work of the library was badly affected due to the high rate of assistance expected from users to get their required data, the investigators initiated a change management process to assist users by developing a library portal with the help of IT department and library staff. The study concluded by pointing out that a flexible environment, active participation and continuous evaluation are the key ingredients of a successful change strategy which could reap greater results in the challenging e- world -libraries.

Entire activities of the academic libraries focus on increased levels of research and development output. From this perspective, Matatiele (2020) has studied the strategies for converting academic libraries to research commons. The study utilized both qualitative and quantitative methods for collecting data. Explorative, descriptive and interpretive elements were applied in complementing data collection. Thematic analysis of data has been carried out and the study found that careful planning and positive conversion patterns were critical factors in evolution and successful implementation of any research common model. The study also identified some critical hindrances in the conversion path. They are: model misconception by university leadership; strategic planning and change management deficiencies; poor communication; homogeneous staffing models and budgetary constraints.

The digital era has brought about drastic changes in the fields of libraries and information centres as well. Many studies on change in libraries are seen as a result of digital emergence. In Thailand, a study was conducted on the management of academic libraries in the digital era by Limwichitr (2022). The study analysed changes with regard to resources, space, services and approaches to change as well as obstacles to change. It used a qualitative case study approach with document analysis, semi structured interviews and observation. And the thematic analysis of

data revealed that in the case of -resource more focus was given to acquiring electronic resources ensuring a robust digital collection. While concerning services, library services have been extended to provide online delivery and access. Library spaces were re-designed to serve multiple purposes compatible for the new era. Finally, the study identified shared vision and communication must be fostered in the library so as to minimize issues and concerns among staff.

A study conducted by Mabunda and Plessis (2022) was aimed to enable library authority, employees and change leaders to understand knowledge management is the potential solution in managing change in the academic libraries in the digital age. The study used exploratory method to gather empirical evidence for claiming knowledge management as a solution for managing change in the digital era. The study used questionnaires and interviews for the collection of data and the reliability of the questionnaire was tested with Cronbach's alpha. The study identified positive relationship between knowledge management and management of change in academic libraries. The study concluded by proposing that libraries need to manage its knowledge so that it could be easily and timely shared to decision makers during change.

The literature on change management in academic libraries indicates the need and importance for systematic procedures to carry out change in academic libraries. Literature claims the importance of communication and transparency in the operations of libraries. Several studies emphasized on the importance of enhancing libraries' research potential. The ultimate component the studies pointed out was focussing on 'user element'. For those versatile services, facilities and re-designed spaces is to be ensured with involvement and commitment of the workforce.

The achievement of change objective is accelerated by a number of factors. In libraries change management has been shown to be greatly impacted by elements including leadership, internal and external factors, resistance and culture. Studies conducted in these aspects would indeed help in understanding the concept in a more excellent manner. Both qualitative and quantitative approaches have been utilized to asses CM in Libraries.

2.8 Leadership

Leadership has got a prominent place in any kind of change initiative. Many studies claim that an appropriate leadership is necessary for the success of the transition. A dissertation by Rosen (2014) tried to find out leaders' role in the organizational change process. Also, the study shed light on the operations included in the change process. The investigator utilized a qualitative method and thus conducted semi-structured interview with the managers of Lantmateriet. Author stated that in the case of Lantmateriet change often happened due to the pressure of external demands. The change process of Lantmateriet consisted of three steps commonly involved in all models of change. That is, planning/diagnosis, transition and stabilizing. Even Though a vision was defined regarding the change process, it was difficult to understand as the hierarchy went down because the distance between the initiator and the employee grew larger. Less time was another constraint. In short, the dissertation concluded that too little time, too little involvement, lacking plan and a huge change for the managers affecting their ability to handle the implementation.

A study by Alqatawenah (2018) indicated that transformational leadership style is the most influencing style of leadership which influences individual and organizational outcomes to achieve competitive advantage. The work conducted at Jordanian insurance companies studied the relationship between transformational leadership styles and change management. Study utilized SPSS package to analyze the quantitative data gathered through questionnaire. The four dimensions of transformation leadership namely Idealized Influence, Inspirational motivation, Intellectual stimulation and Empowerment have been analyzed against change management. The study pointed out that there is a statistically significant relationship occurs between change management and the dimensions of transformational leadership in Jordanian insurance companies.

Gilley et al., (2009) conducted a study on organizational change. In the study the authors considered leaders as change agents in order to carry out a successful change programme. The study examined change efforts from the perspective of employees and their beliefs in the effectiveness of their managers in implementing

change. A five-point scale ranging from never to always was used for analysing the data. The significant relationships between specific leader behaviours and success rates of change are the most important contribution of this study. The results of the study reveal the significance of approaching change from a person centered perspective. The study further argued that organizational leaders who address issues of motivation and communication are more likely to be successful in implementing change.

In conclusion Various studies conducted on leaders' roles in change management. Interviews and qualitative techniques were used. Research has also examined the connection between change management and leadership.

2.9 Resistance

Resistance is a natural response to any disturbance in the existing status quo. When resistance blocks the way to new roads, it needs to be addressed so that the implementation of change could be done hassle free. Thus the studies regarding resistance need to be considered in order to identify various aspects of employee resistance and methodologies adopted widely to fix these issues.

Identifying the reasons behind resistance would enable the authority to minimize resistance and empower action. Kuzhda (2016) explained the change management process and the resistance to change as well as the reasons behind the employee resistance. The resistance to change has been estimated through inspecting the change formula and the experts' answers questionnaires, selecting and ranking causes of resistance to change. According to the work, the major ground for the resistance for change are the financial reasons (decrease in salary), overload work, uninformed employees, and the fear of the unknown change. The study recognizes proper education, effective communication, facilitation, motivation, negotiation, manipulation, co-optation and coercion are the possible methods for managing resistance. Conclude by suggesting the selection of the method to manage resistance solely depends on the type of change and the situation where the change is being applied.

Pieterse et al., (2012) in the article titled "Professional discourses and resistance to change" argues that "every change program contains subjective dimensions involving informal sensemaking interactions" The study revealed that how the language being used in the communication process of the change programme effects resistance to change. The study utilized the comfort of a qualitative research design in order to give a detailed account of the communication among professionals during the change process. The data gathered by semi structured questionnaire desk research, observation and a diagnostic workshop with the management team. The study reveals that "resistance to change and difficulties in cooperation in a specific change project can be related to unarticulated non-alignments of professional discourses".

A survey was conducted to identify the factors influencing resistance of employees of university libraries of Tehran university towards technological change by Nakhoda & Tajik (2017). The research specifically examined employee's personal factors influencing resistance. The authors had gone through an exhaustive and meticulous review of available literature about the resistance factors of employees and a questionnaire was devised on resistance to technological change. The data was collected from a sample of employees' fin technology division and analyzed with the help of SPSS and PLS. The scholars identified eleven resisting factors termed - ambiguity, threat of the current situation, habit, lack of interest, the need for relearning, unsuitable understanding, inefficient rewarding system, emotional reactions, lack of interest understanding, inflexibility of the beliefs and feeling of being a veteran in the organization -which influence the resistance of employees in the university libraries.

A detailed account of resistance, its various aspects, forms and reasons have been detailed by Sendrea (2023). The study identified passive resistance as more threatening than active resistance as it is difficult to make out. Further the paper discussed various factors to resistance (psychological, social, economical and organizational) and highlighted that measures like motivation, communication and involvement should be applied to reduce resistance. The entire study was empirically

supported and study's emphasis on the value of organizational culture and organizational learning in managing change highlighted in its concluding section.

After analysing the causes of resistance, proper resistance management strategies have to be implemented so as to minimize resistance. Study by Reddy (2010) on managing change in service and manufacturing industry, investigated the levels of resistance among service and manufacturing industries. The study used three sets of questionnaires to collect data. Field survey method also was used to collect primary data. ANOVA test was used for the analysis of data. Since the study was conducted between service and manufacturing industry, it found that levels of employee resistance and management resistance are higher in service industry than manufacturing industry. But in the case of management resistance level as viewed by employee, which was comparatively higher in manufacturing industry than service industry. Finally, the study proposed a supplementary model to manage change which had given emphasis on resistance management. The model proposed certain ground rules to be followed in the organization to minimize resistance which were: organizational culture, leadership, communication, motivation and involvement.

In conclusion numerous research projects were conducted on resistance to change. Research has been done on both common and personal factors that affect resistance. Both qualitative and quantitative research methodologies were used in the studies.

2.10 Culture and change

Culture has a great importance in bringing success to the change initiative. A suitable culture will positively impact change initiatives. Many researchers claimed this with the aid of their studies that the management of change benefits from an understanding of organizational culture.

Some literature reviews exhibit a threatening trend upcoming in the library scenario. According to Eva (2018) in a study titled “a culture of No” indicates that there is a culture in libraries which makes it difficult to say “yes”. According to the author, the rigid culture where criticism and negative responses to novel and innovative ideas could be commonly seen in the libraries round the globe. The author

further tells that even though mission and objectives of library always positive and welcoming but when coming to the case of providing a small service, the attitude would be a 'no'. According to the author, the library should be more creative and flexible in attracting its users and also to provide versatile services to clients. And should have the courage to change the old rules which does not make any sense in the current era.

Rodrigues (2013) has attempted a study on organizational culture and change management in the academic library and information Centers (LICs) in coastal Karnataka. In the study the researcher tried to find out the employee perception of change management, the nature of culture prevailing in the library, the effect of culture on change management in the libraries and identifying resistance factors of employees. Also to find out how these libraries manage change. A structured questionnaire was used for collecting data. SPSS statistical package was used for data analysis. Percentages, mean value and percentage mean were used for the evaluation of the results. The culture prevailing in the libraries analyzed with the help of OCTAPACE culture assessment profile. The study revealed a change oriented culture is prevailing in LICs under study and are best prepared for change. The study further found that the library staff were less co-operative during change and rewarding staff for support and cooperation is needed. And very important finding was that the LICs were either slow in implementing change or not fully successful in implementing planned projects. The study identified fear of change, loss of comfort, loss of status, loss of expertise, inability to cope up with change, loss of self esteem and loss of job as the resisting factors. Another important finding was the level of organizational culture tend to determine the level of change management in the LICs. The research strongly recommended the need to form a library committee for the effective functioning in the LICs and suggested that the libraries need to keep the records of expenditure on all aspects.

A study conducted by Martin (2013) opined that culture has a positive impact on the implementation of change. The author further explained that A positive organizational culture helps in reducing resistance to change. According to him the use of cultural rituals and sagas help in implementing change. Cultural sagas would

help people to know more about the history developments and the norms of the organization which definitely have a positive impact towards change.

2.11 Conclusion

This literature review helped the researcher in identifying various methodologies and techniques adopted by previous researchers in the subject field. Many studies claimed that change management technologies have improved the performance of work. Majority of studies have been conducted in management, IT and banking sectors. Qualitative research methods utilized the advantages of in-depth interviews and case study methods. Whereas in quantitative research methodology, ANOVA test was mainly used. Numerous studies assert a connection between change management and other elements of change. Some studies detailed the construction of change assessment tool to manage change. And explained how they assessed the CM in their respective institutions with the help of the constructed tool. Generally, in the library and information science field, studies see changes occurring as a result of digital emergence, ever changing user demands, frequent changes in teaching and learning along with increased demand for collaborative environment. However no research has been undertaken to determine how far the libraries has progressed through different steps of change management, particularly in university libraries in Kerala. Hence the present study is relevant since it seeks to determine how the changes are being managed in university libraries by exhaustively examining the operational facets encompassing within the discipline of change management.

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Chapter 3

METHODOLOGY

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3.1 Introduction

Change management confirms certain standardized and consistent measures, techniques and processes that are crucial in implementing a successful change. Also, the proposed change could be made faster by adopting change management. Studies and researches on CM differ on its application and methodology. A better part of the previous research studies has endeavoured to investigate CM by examining the benefits and results obtained through change, impact of motivation on change management, impact of leadership on change management, how resistance affects change management, how culture affects change management, comparison of various change models etc. These types of research perspectives are worthwhile in identifying change management applications and its impacts in organizations. But the present study is unique which moulds a new creative management approach and procedure for change management in the university library systems in the state of Kerala.

Advancement in the field of information and communication technologies has brought tremendous changes in every type of organization, especially in libraries. This has leveraged the magnitude and versatility of changes which organizations, in particular libraries have to manage. While going through the change management research studies, it is evident that the change management operations are comparatively less studied and least practiced in service oriented institutions like libraries and information centres when compared to business and profit oriented organizations. Along these lines this study tries to explore change management from a different perspective.

Rather than diagnosing different change models and factors influencing change, the primary goal of this study is to identify the practices which university library systems follow to manage change in the contemporaneous scenario. The study also aims at identifying the weaker areas of change management.

The study made the framework of the research based on leading models and theories of change management. Earlier a typical part of change management has been studied qualitatively which were based on in depth interviews, researches in real

time environment of change management, case studies etc., which contributed deeper understanding on the perspectives of individuals and organizations undergoing a particular change over a period of time

The research was intended for a quantitative research approach as well as special interviews with chief librarians. As this study involves different university library systems functioning across the state, this approach allows in identifying the different practices and patterns of change management prevailing in different library systems. The collected data can be statistically analysed and also the relationship in procedures and process of change management among different university libraries could be derived. Besides, the factors to success or failure can be identified and measures of implementing successful change management could be recommended.

The approach could help in identifying the best practice which may be recommended while managing changes in non-profit oriented academic libraries especially in university libraries.

This chapter gives an account of the variables selected for the study, sampling design, data collection tools, procedures of data collection as well as the tools and techniques used for the analysis of data.

3.2 Variables

The variables used in the study have been classified into two broad categories namely classificatory variable (Independent variable) and study variable (Dependent variable).

3.2.1 Independent variable

Independent variables used in this study are gender, university, designation of employee and Experience

3.2.1.1 Gender

It is the people who make the change happen. In respect of gender, male and female view change and change related matters in different manner. The behavioural pattern of men and women differ in mental and cognitive abilities, personality and emotions. Thus, a study based on the ability of the human resource to make change

highly demands gender wise analysis. Furthermore, earlier researches show that men and women have different perceptions on the context and process of change (Deprez et al., 2012). Understanding gender wise differences surely would provide means to get the clear picture of change management scenario under study and develop mechanisms to address the issue in hand.

3.2.1.2 University

Here the researcher tried to find out university wise differences in the change management practices in university libraries. In Order to explain the criteria for the selection of university in the sample, a brief description on the universities in the state of Kerala and the established year of each university is given in tabular form.

Table 1

List of Universities

Sl. No.	Name of University	Established Year
1	University of Kerala	1937
2	University of Calicut	1968
3	Kerala Agricultural University	1971
4	Cochin University of Science and Technology	1971
5	Mahatma Gandhi University	1983
6	Sree Sankaracharya University of Sanskrit	1993
7	Kannur University	1995
8	National University of Advanced Legal Studies	2008
9	Central university of Kerala	2009
10	Kerala University of Fisheries and Ocean Studies	2010
11	Kerala Veterinary and Animal Science University	2010
12	Kerala University of Health Science	2010
13	Thunchath Ezhuthachan Malayalam Sarvakalasala	2012
14	APJ Abdul Kalam Technological University	2014
15	Sree Narayana Guru Open University	2020
16	Kerala University of Digital Sciences, Innovation and Technology	2020

The universities that were founded earlier may have greater experience of different kinds of changes than those were founded later. From the table universities established before year 2000 have been selected for the study. Staff strength working at different levels, well developed library system, as well as year of establishment, were also considered while selecting university libraries for the study. Libraries of seven prominent state universities in Kerala namely, University of Kerala, Mahatma Gandhi University, Cochin University of Science and Technology, Kerala Agricultural University, Sree Sankaracharya University of Sanskrit, University of Calicut and Kannur University were selected for the study.

University of Kerala

Originally known as the "University of Travancore," the university of Kerala was founded on November 1, 1937. Kerala's southern areas are primarily served by the state's oldest university. The biggest and oldest university library in Kerala is the Kerala University Library, which was founded in 1942. It consists of a well-developed central library along with a number of departmental libraries and study centres. Apart from this, there are University institute of technology, University teacher education centres, and university college of engineering also have specialized libraries.

(<https://www.keralauniversity.ac.in/> and <https://www.kulib.in/>)

Mahatma Gandhi University

Mahatma Gandhi University established in the year 1983 situated in Priyadarshini hills, Athirampuzha. With a wide variety of specializations in various undergraduate, post graduate and professional programmes, the university caters to the higher education needs of people of central Kerala. The university library system consists of the well-developed central library, various departmental libraries and study centres located at different campuses.

(<https://www.mgu.ac.in/central-facilities/library/>)

Cochin University of Science and Technology

The university of Cochin was established in the year 1971 with the objective of “Promoting Graduate and Post-Graduate studies and Advanced Research in Applied Sciences, Technology, Industry, Commerce, Management and Social sciences.” The library system has the credit of being the first fully automated library in the state of Kerala. The university library established centrally at the main campus, opens the resources to all the departments of the university.

(<http://www.cusat.ac.in>).

Kerala Agricultural University

The university established in the year 1971 imparts education and research in agricultural sciences and allied subjects. The university library system started functioning in 1995. The library aims at the collection, processing and dissemination of information on agriculture. The library system includes the central library at Vellanikkara, college and research centre libraries spread across the state.

(<https://www.kau.in>).

Sree Sankaracharya University of Sanskrit

The university established in 1993 with an aim to impart knowledge through teaching, research and innovations in Sanskrit. The library system consists of a central library at Kalady and libraries at the regional centres. (<https://www.ssus.ac.in/>).

University of Calicut

The largest university in the state of Kerala, University of Calicut established in 1968. The university aims to provide assistance to the educational requirements of the youth especially in Malabar. The library system of the university includes the university central library and various departmental libraries in and around the campus as well as off campus centres. (<http://www.universityofcalicut.info>).

Kannur University

The university was established in 1996 with an aim to provide world class education committed to the pursuit of excellence in teaching and research. The library system consists of university central library and departmental libraries at various campuses. (<https://www.kannuruniversity.ac.in>).

3.2.1.3 Designation

As the study emphasizes management, and management is the art of getting things done through people in a coordinated and shared way, while their work profile is in different hierarchies. These hierarchies are called levels of management. The present study comprising of three levels (categories) of designation. Separate semi structured interview has been designed for university librarians and hence it is not mentioned in the three categories of designations discussed here.

The First category of designation includes Deputy Librarians and Assistant Librarians. It is indicated by the term “Assistant Librarians” in the study

The Second category includes the designation of Information scientists, Junior Librarians and Reference Assistants. It is indicated by the term “Junior Librarians” in the study

The third category includes designation of Professional Assistants, Technical Assistants and Library Assistants. It is indicated by the term “Professional Assistants” in the study

3.2.1.4 Experience

Albert Einstein quoted, “the only source of knowledge is experience”. Experience prepares one to administer the learnings they acquire to harvest well-disposed and amiable outputs. The everyday realities of working life are learned through experience (Gill, 2015). The study consisting of three categories of experience and they are: Up to 10 years, 11-20 years, and above 20 years of experience.

3.2.2 Dependant Variables:

The dependant variables for the study are - Change need identification, Strategy formulation, Planning, communication, resistance management, implementation, evaluation and change sustenance. The study also includes internal and external factors to change, leadership during change and change obstacles.

3.2.2.1 Change Need Identification

Recognizing the need for change would be the primary step in the management of change. Without the knowledge of present practices in the library environment, it is impossible to initiate a change. A comparison of present practices and procedures followed in libraries in Kerala in relation to the globally outstanding and leading libraries would be an eye opener. This disparity creates a sense of urgency which leads “to change” as an imperative demand. The encouragement and support provided by the authority to explore innovative approaches to get a deeper understanding of the internal and external environment has a critical role in accepting a new environment. The first step in John Hayes theory of change management (Hayes, 2002) as well as the initial step in the Kotter’s eight step model (Kotter 1995) points to the importance of identification of change need as a primary concern

Identification of the need for change in this study considers awareness of changes taking place in the environment of the library system, anticipating change, awareness of internal and external library environments and motivation to accept change.

3.2.2.2 Strategy Formulation

It is a procedure by which the organization picks out the most suitable technique to attain the change goals. Organizations cannot achieve their goals without applying strategic formulation (Thongsookularn &Ularn ,2019). Strategy has to be developed based on the strength of the library, with a focus on the areas which need improvement. The threats which are beyond the control of the library could not

be ignored. While setting an object-oriented goal for the library, stake holder support is as important as staff participation.

In Kotter's model, the step "Develop Vision and Strategy" (Kotter, 1995), provides the importance of strategy formulation in the management of change and describes strategy as "a logic for how the vision can be achieved". Also Stage II & III of John Hayes theory "Diagnosis, Plan and prepare change" (John Hayes, 2010), the "Unfreeze" phase of Kurt Lewin (Lewin, K. 1947), the first hard element- "Strategy" of Mc Kinsey's Seven-S model of change also identified strategy formulation as an indispensable step in the management of change.

Strategy formulation for this study includes use of strategy formulation tools, staff participation, setting of objective oriented goal, stakeholder support, considerations of previous experiences and culture.

3.2.2.3 Planning

Planning is one of the most prominent factors in the management of change. While making a change plan, the end user preference has utmost importance. Employee readiness to change along with a study on skills of staff may be analysed. Consideration shall be given, to make sure that the role assigned to each staff is as per their skill set. Ensuring an adequate organizational structure to carry out change is required for time bound completion of the task. Confirming each and every action to be taken, go along with leading and latest practices, will ease the implementation of change.

Kotter's Model, under the "Vision and Strategy" heading, describes planning as "Specific steps and time tables to implement change" (Kotter, 1995). The phase III of John Hayes theory "Plan and Prepare Change" (Hayes, 2002) incorporates planning of change. This phase in this study includes perception of library professionals about considering user preferences, preparation of blue print of actions, role of staff, skill set of staff, analysing employee readiness, time allocation, apt organizational structure and constituting a team to implement change.

3.2.2.4 Communication

Communication is considered as the “informational component” in the change process. A two-way communication is always desirable. The feeling that the authority listens to staff will positively influence any change initiative. Authorities are always better informed about the status of change initiative when there is time bound and appropriate communication.

The Vth phase of Kotter’s model “communicate change vision” (Kotter, 1995), points out the importance of communication in the change process. The communication in the present study includes means of communication, sources of communication and employee’s perception about the communication received during change. This will help in understanding communication pattern prevailing in the library.

3.2.2.5 Resistance Management

How an institution identifies the factors causing resistance and cope up with resistance determines the success of proposed change. Anxiety or fear of unknown change is usually observed. Cultivating a belief that the apprehensions will be addressed in a tangible way would assist in minimizing resistance. Proper training, communication and especially genuine recognition as well as appreciation for good work from authority are the crucial decisive factors in minimizing resistance.

The resistance management methodologies applied in libraries are enquired here. “Removing obstacles” in Kotter’s Change Model (Kotter, 1995) deals with resistance management.

3.2.2.6 Implementation

This phase is the change itself. It is the step in the change process that involves taking action to bring about change (John Hayes, 2010). The same is explained in the 6th step of Kotter’s model (Kotter, 1995). Implementation must ensure that all activities involved in change are taking place as per the work plan. Latest and proper procedures, resources and tools for implementation must be ensured and the process should have a strong change team led by the leader. The successful implementation of change is based on a defined process to guide the change and a powerful leadership team to lead the change (Sakshi, 2012). Successful

implementation demands support of authority to address difficulties while implementing change and staff support to ensure coordination and co-operation among various internal units and departments. "Enable action by removing barriers" - the fifth step in Kotter's change model-Remove obstacles and empower action as well as "move" phase in Kurt Lewin's change model and the fourth stage "Implement the change" in John Hayes theory of change management also deals with implementation of change. According to Kurt Lewin good leadership and reassurance is significant in implementation. The implementation in the present study is intended to investigate into staff support, skill, authority, coordination, cooperation, step by step implementation possibility, work plan-based activities, priority-based action, time bound completion of tasks, latest tools and techniques for implementation and formation of team

3.2.2.7 Evaluation

Evaluation at the post implementation stage is the key technique to determine the success of a change regarding, whether the change had attained the predesigned goal, effective and efficient use of the resources has been done etc. Evaluation is indicated in Kurt Lewin's III stage-" Refreeze." Also, the last step in Kotter's change model "make change permanent" deals with evaluation. Review Structured at frequent and regular intervals of time can provide timely feedback to the managers about the successful implementation of change (Kumar, 2004).

3.2.2.8 Change Sustainance

This is the final, yet very important phase in the management of change. After the implementation of change, there is a chance that persons involved may go back to traditional working practices. Hence it is important to make them stick with the new ways of working. The fifth stage in Hays's theory - "sustain change" indicates the importance of this phase. Present study details the pattern of change sustainance activities taking place in the libraries.

3.2.3 Factors Influencing Change

The study also examines the factors which influence change and its management in the library system.

3.2.3.1 Internal and External Factors Influencing Change Process

The internal and external factors which influence change in the library, its impact on Change Management is identified. Along with that ‘most change happening segment’ of the library is also identified

3.2.3.2 Change Obstacles

Resistance is a response of the workforce to maintain the familiar and thus there would be a reluctance to change. The cause of resistance could be either personal, institutional or both. Both organizational obstacles and personal obstacles are studied here and attempt is made to identify the most critical organizational and personal resisting factors which needs immediate action.

3.2.3.3 Leadership

It is a very crucial factor determining the success of the whole change management effort. Kotter and Cohn (2002) found that successful change management probably has strong leadership, communication and employee participation. Cameron and Quinn (2011) identified effective leadership is very much critical for a successful change in an organization. It is leadership which provides the change management - the vision, guidance and necessary directions to succeed in the transition. In different change scenario there would be an expert team leading the change along with librarian. The leadership in this study means leadership during change.

3.3 Population

It would be normally doubtful and impractical to study the entire population to reach generalisations through research studies. For the purpose the researcher collects samples from the entire set of cases, which is called population (Taherdoost, 2016). The potential population of the study comprises library professionals working in the university libraries of Kerala. Out of the sixteen universities in the state, seven universities have been selected based on their year of establishment and tenure of persons working in these universities and well-developed library system. Universities with longer tradition and experience can contribute more about the changes occurring in their institutions and the nature of its management. The library professionals having BLiSc degree and above working in university library system including central libraries, departmental libraries, and other study centres of these seven

universities have been selected for the study. The researcher identified the population in the libraries of selected universities for research. The entire permanent staff in the seven universities have been selected for the study.

The total number of staff in each university library systems were obtained through websites of university libraries, annual reports and diaries of concerned universities. The data collected from the sources were verified with a supportive team in different libraries of universities concerned.

3.3.1 Breakup of the Respondents

The questionnaires have been distributed to the entire staff in the selected university libraries during the time of data collection that was during 2019. The total number of questionnaires distributed and the number of responses received back and found useful for the study have been detailed in table 2.

Table 2

University wise Distribution of Respondents

University	No. of Professionals	No. of Questionnaires Distributed	Responses Received Back	Percentage of response
University of Kerala (KU)	89	89	80	89.88
Cochin University of Science & Technology (CUSAT)	51	51	47	92.15
Mahatma Gandhi University (MGU)	58	58	40	68.96
Sree Sankaracharya University of Sanskrit (SSUS)	15	15	14	93.33
University of Calicut (CU)	66	66	62	93.93
Kannur University (KNRU)	23	23	14	60.86
Kerala Agricultural University (KAU)	14	14	9	64.28
Total	304	304	266	87.50

3.3.2 Demographic Profile of Respondents

The demographic characteristics of the respondents, such as gender, age, educational attainment, years of experience and designations are represented by the percentages indicated in the following figures.

Figure 1

Gender-wise Distribution of Respondents

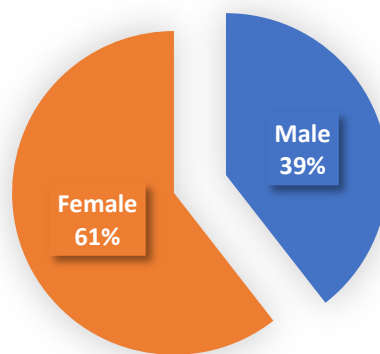
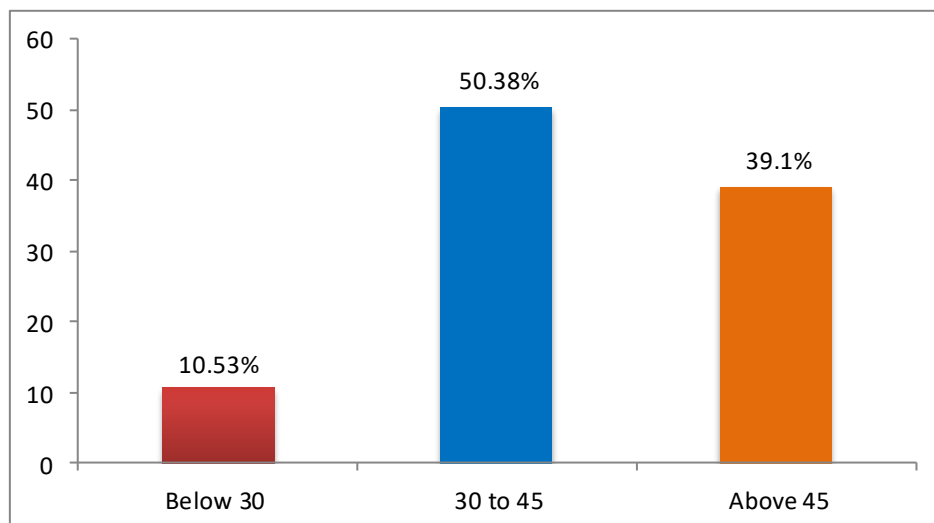


Figure 1 depicts that a majority of the working professionals are females. The females make up 61 percent of the respondents, while men make up 39 percent of the respondents.

Figure 2

Age-wise Distribution of Respondents



It may be noted that Figure 2 shows that more than half of the respondents that means 50.38 percentage come into the category of age group that ranges from 30 to 45 years old, whereas only 10.53 percentage of respondents falls in the category below 30 age group. In contrast, 39.1 percent of the respondents fall into the category of those aged 45 and older.

Figure 3

Experience-wise Distribution of Respondents

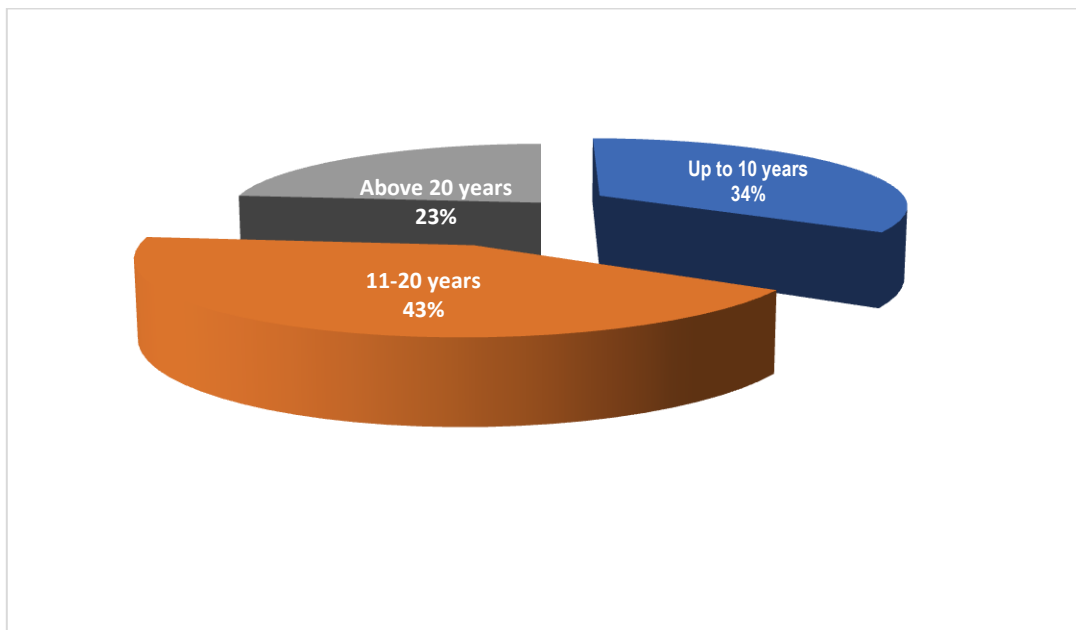
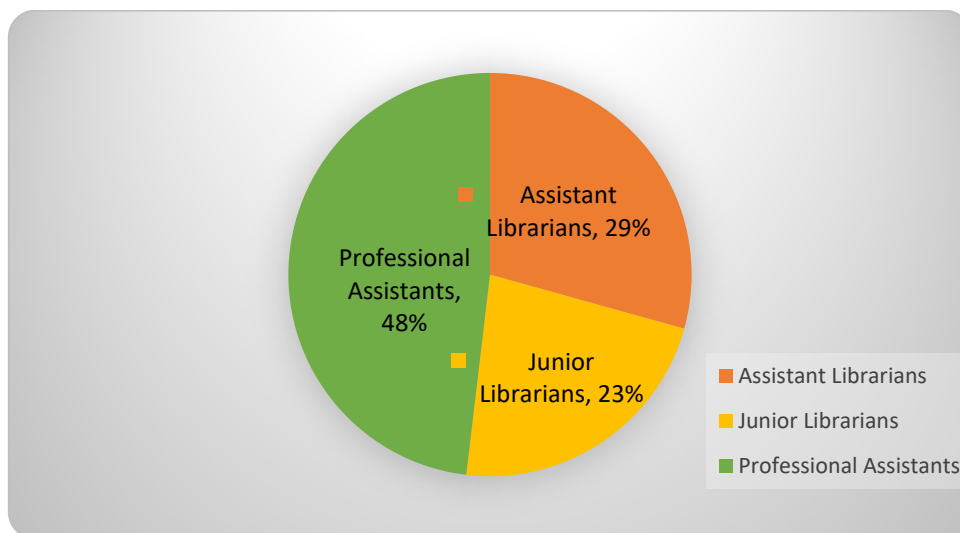


Figure 3 shows that 34 percent of the respondents fell into the category of having up to 10 years of experience, while 23 percent of the respondents fell into the category of having more than 20 years of experience. While the majority of responders (43 percent) are in the age bracket of 11 to 20 years old. This indicates that the majority of responders fall into the medium group, have a significant amount of experience in their field.

Figure 4

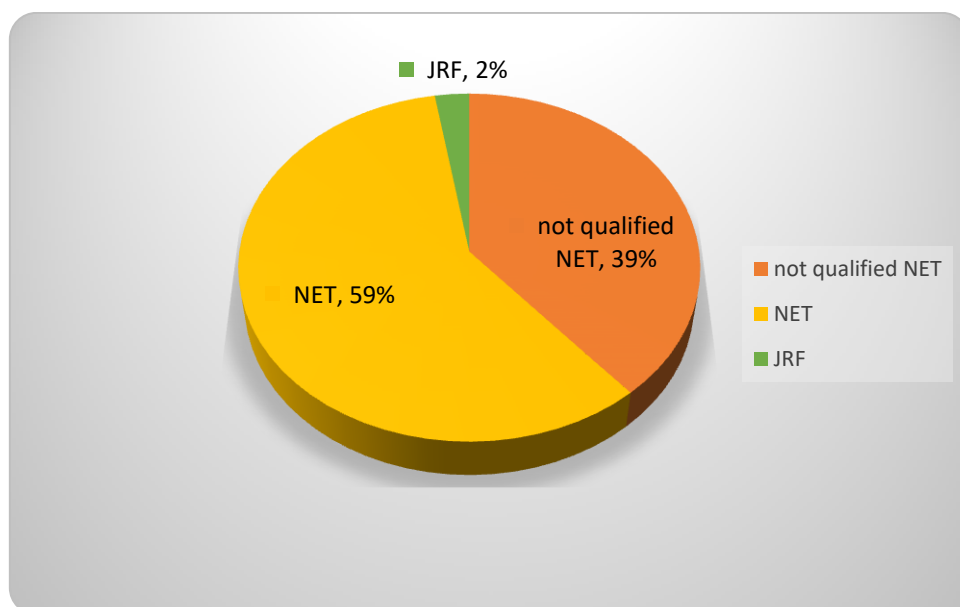
Designation-wise Distribution of Respondents



The designation wise distribution of population indicates that Professional Assistants constitute the major part of the population that means it covers about 48 percent of the population whereas 23 percent respondents are Junior Librarians and 29 percent are Assistant Librarians.

Figure 5

UGC NET/JRF Qualified Respondents



From figure 5, it is clear 59 percent, have qualified UGC NET. Whereas only 2 percent have scored JRF. The study identifies that more than fifty percentage of professionals have qualified with NET.

In contrast 39 percent of them do not qualify either NET or JRF. Researcher considered the responses only from the qualified professionals of library and information science discipline

Highest Professional Qualifications

The study recognized that 72.93 percent have masters in library and information science. Whereas 12.03 percent have MPhil and 12.78 percent have PhD in the subject concerned. The study identified that a minimal category i.e., 2.26 percent have only BLiSc degree. These statistics are shown in table 3.

Table 3

Highest Professional Qualifications

Qualifications	No. of responses	Percentage
BLISc	6	2.26
MLISc	194	72.93
M.Phil	32	12.03
PhD	34	12.78
Total	266	100

3.4 Data Collection Tools

Primary and secondary data have been collected for the study. Secondary data have been collected from both online and offline sources. The print sources include books, journals and other various reference sources (annual reports, diaries etc.) The online sources including various ETDs, e journals, e databases such as Emerald, ProQuest, Science direct, Elsevier, Web of Science, Shodhganga Shodhsindhu etc. have been consulted.

The present study has utilized questionnaires for collecting primary data.

3.4.1 Questionnaire

The research approach practiced in this study was survey method. For collection of data, the investigator adopted fully structured questionnaire. Separate questionnaires were prepared for library professionals and interview session arranged for University librarians. A draft questionnaire was prepared, subject to problem under study based on the steps in the empirically proved theories of leading change management models to handle change. Along with discussion with the supervising teacher and on theoretical back ground, the questionnaire was prepared considering the opinions, suggestions and perception of subject experts in the field of library and information science. As well as experts and pioneers from the field of commerce and management studies, literature review etc. have contributed for the preparation of questionnaire. In addition to that, observation, interaction with library professionals and investigator's personal experience in the university library also helped in gathering additional information required for the study. After the construction of the questionnaire, the testing of reliability of the questionnaire was done with Cronbach's alpha.

3.4.2 Testing of Reliability using Cronbach's Alpha

The reliability of the questionnaire instrument has been tested using Cronbach's Alpha. According to George and Mallery (2003), The Cronbach's Alpha has a value between 0 and 1. The closer the Cronbach's Alpha value to 1, the greater the internal consistency of the item within the scale. Cronbach's Alpha value above 0.90 indicates excellent internal consistency (i.e., $\alpha \geq 0.9$), above 0.80 is good (i.e., $0.9 > \alpha \geq 0.8$), above 0.70 is acceptable (i.e., $0.8 > \alpha \geq 0.7$), above 0.60 is questionable (i.e., $0.7 > \alpha \geq 0.6$), above 0.50 is poor (i.e., $0.6 > \alpha \geq 0.5$), and below 0.50 is unacceptable (i.e., $0.5 > \alpha$). The obtained Cronbach alpha values have been exhibited in table 4

Table 4*Cronbach's Alpha Values*

Sl. No.	Item	No. of Items	Cron Bach's Alpha
1.	Identifying change need	5	0.680
2.	Internal factors influencing change	10	0.800
3.	External factors influencing change	7	0.827
4.	Strategy formulation	9	0.773
5.	Planning	11	0.884
6.	Organizational obstacles	6	0.617
7.	Personal obstacles	7	0.867
8.	Communication	9	0.937
9.	Means of communication	8	0.590
10.	Resistance Management	6	0.617
11.	Change Implementation	12	0.933
12.	Leadership	7	0.907
13.	Evaluation	13	0.909
14.	Change Sustenance	5	0.762

The questionnaire was modified by eliminating a few questions as per Cronbach's alpha benchmark. The final questionnaire was again verified with the supervisor and the experts. After review, the updation of the questionnaire was carried out as per the instructions and suggestions obtained from the same. A pilot study of the questionnaire was conducted in order to identify the feasibility and ease of understanding of the questionnaire. The questionnaire was distributed among group of selected professionals for pilot study and finalized with the suggestions received.

The final questionnaire was prepared with a covering letter which shortly elucidated the study in a few lines and guaranteed the respondents that their responses would be kept confidential and be used only for the said research purpose.

A 21-categorised item wise questionnaire was methodically formulated for the study. The questionnaire utilised the advantage of a combination of Likert-Scale, Ranking method and Multiple-choice questions. The first part of the questionnaire intends to collect general information i.e., gender, age, university, designation, experience and qualification. The second part of the questionnaire was divided into eight sections in consistent with the objectives.

The first section in this part dealt with the need of change identification which includes questions related to the awareness of changes taking place both in the operational environment of library, and outer world, awareness of current position of library in relation with world class libraries, motivation given to accept new ways of working.

Along with that attempt was made to point out the most influencing external factor which causes change in the libraries and consequently changing internal segments were also identified. Furthermore, the frequency of changes happening in each internal segment was examined. Likert scale and ranking methods were used in this section.

The second section dealt with strategy formulation which included questions related to the use of strategy formulation tools, ensuring staff participation, achievable goal setting, coincidence of goal with mission and aims, stakeholder convincing and support, considering past experiences, review on culture and identifying benefits of strategy formulation. This amply supported in analysing ability to formulate strategy to address the change.

The third section discussed the planning potential of libraries to change. The questions formulated were related with analysing employee readiness to change, whether planning had a priority in the library, during plan stage whether each staff roles were defined and user preferences were considered. Also, questions related to - the study on staff skill, formation of change team, availability of adequate organizational structure to carry out change, setting time frame for completion of each stage of change, establishment of latest and leading practices for handling change and whether blueprint of actions were set – have been included.

The fourth section dealt with the communication pattern prevalent in libraries during change. According to Armenakis et. al. (1999) communication is considered as the key mechanism for increasing understanding and acceptance, thus if library staff are not informed on what to do during the implementation process, they would not fully support the entire project. And if the employees are not provided with adequate information required for implementation it might result in resistance and might lead to change failure (Appiah, Antonia & Adams, Musah & Adu, Isaac, 2016)

For the purpose, the questions framed were related to - means of communication, satisfaction on the level of information communicated, also questions on whether the change need is clearly communicated, information on the roles of staff were timely received, whether authority listen to staff concerns regarding change, doubts were timely clarified, questions regarding the relevance of the message received and whether library makes sure that the messages are reaching employees and being understood by them.

The fifth section discussed the the resistance management practices followed in the university libraries. Provision for proper training and guidance, mechanism to address the apprehensions and concern of workforce regarding change, freedom to express staff view, recognition for good initiative, cultivating a feeling of involvement, proper communication are identified and included in resistance management section of the questionnaire.

In additions to this, resistance factors which pull back the propelling of change also discussed. The section further subdivided into two categories viz, organizational obstacles and personal obstacles. Under organizational obstacles title, the questions were related to insufficient funds, lack of infrastructure, politics in the organization, attitude of authority, attitude of staff and insufficient manpower. Whereas under personal obstacles, the questions were related to fear of unknown change, lack of skill, fear of losing power, fear of workload, fear of financial loss, lack of mentoring and training and fear of losing recognition. Along with these questions it helps in identifying the personal and institutional resisting factors which prevent libraries to attain its goal which has to be addressed

The sixth section tried to find out the practices of university libraries to implement change successfully. For that, the questions were prepared in connection with - whether all activities involved in change process carried out as per work plan, preference given for urgent matters, availability of proper procedures and inevitable tools for implementing change, time bound implementation, whether difficulties addressed properly, sufficient resource were allocated for implementation, step by step implementation, consistency in cooperating and coordinating various internal units, staff support in implementation, being of hassle free implementation, ample powers skills and freedom for change team to carry out change and change lead by the head of library.

Leadership observed during change is discussed in the next phase. Leader's motivation, commitment to change, trust on leader, leader's support is also enquired in this section.

The eighth section attempted to figure out how success of a change is being evaluated. The study also intended to identify the change sustenance procedures practiced in university libraries in Kerala. The questions were designed to identify employee perception in relation to an enquiry on - critical examination of the change process is being done, if library encourage evaluation, if user feedback considered for assessing success of change, acceptance of negative feedback, employee performance could be assessed in an accountable way and library able to take corrective actions on underperformed workers, whether reviews and rectifications were made as per the feedback, in any case library takes measures to reinforce and sustain change, causes of reverting back to older ways of working, and introduced change becomes a main stream way of working rather than something added on.

The final part is an open space for giving the valuable suggestion and experiences of professionals regarding management of change in their institutions.

3.5 Data Scoring and Grading

A five-point Likert scale was used to report data for some of the items of the questionnaire. There are five responses against each statement which is termed as Strongly Agree, Agree, Neither Agree nor Disagree, Disagree and Strongly Disagree.

The score 1, 2, 3, 4, and 5 have been given for positive statements and reverse scores for negative statements. The scores 1-1.99 is considered as Poor, 2-2.99 is considered as Low, 3- 3.99 is considered as Moderate as well as 4 and above is considered as a high.

3.6 Data Collection Procedure

The respondents have given instructions to fill the questionnaire and ample time was given to fill the questionnaire. The researcher collected back the filled questionnaires. For those who were unable to fill the questionnaire by the time given, the investigator gave self-addressed stamped envelopes to return the filled questionnaire. Majority of the questionnaires were returned by hand and a few numbers were received through post. The responses of the respondents were warm, positive and encouraging. From the received responses, only fully completed questionnaires have been used for research purpose.

3.7 Consolidation of Data

Consolidation of collected data was done using MS-EXCEL. And further statistical analysis was carried out using SPSS and MS EXCEL. The hypothesis was tested based on the results obtained from analysis.

3.7.1 Data Analysis Techniques

1. Mean: It is the average values used to measure the level of variables.
2. ANOVA (Analysis of Variance): This inferential statistical test used to test the variation in one or more groups by comparing the mean values.
3. Tukey's HSD Test: It is a statistical tool for testing the means of two or more sets of data to identify the significant difference between them. (<https://www.scalestatistics.com>).
4. Scheffe Test: It is a conservative method of testing the significance of one or more comparisons of mean values arising in the analysis of variance, where the comparisons are selected by inspection as being of interest. (Kendal & Buckland, 1972)

5. Ranking method: It refers to placing things in order based on certain criteria. It could be either in ascending or descending order.
6. Weighted Mean: When certain data points in a data set are more representative or more significance, then weighted mean is used. It is calculated by multiplying the weight with a particular outcome.
7. Simple Percentage Analysis: It refers to a special kind of rate, percentage is used in making a comparison between two or more series of data. A percentage is used to determine the relationship between the series.
8. Regression Analysis: Regression is the determination of a statistical relationship between two or more variables. Regression can only interpret what exists physically. (Kothari, 2010b)

3.8 Citation Style Used

In the present study the researcher followed the APA 7th edition format for preparing the bibliographies and in-text citations. The freedom of a combination of parentheses and non-parenthesis (narrative) in text citations have been utilized in this work.

3.9 Conclusion

This chapter provides a thorough overview of the research methods the investigator used for the entire research work. The chapter provides an overview of the study's methodology, including the sampling strategy, specifics of the questionnaire, instruments and methods for data collection, procedures for gathering data, and statistical methods for validating the tool as well as analysing data. The data analysis and interpretation are covered in the following chapter.

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Chapter 4

ANALYSIS

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4.1 Introduction

This chapter describes the analysis of data obtained through the responses of library professionals working in the university library systems in Kerala. The study focussed on the change management practices followed in the university library systems in Kerala. The factors the study scrutinized are change need identification, frequent 'change observing' segments of library, internal and external factors influencing change, strategy formulation, planning change, communication, leadership during change, resistance and its management, implementation of changes in the library as well as evaluation and change sustenance observed in the university libraries.

MS Excel was used to tabulate the acquired data. Data analysis was done using SPSS software. The approach and level of analysis have been decided based on the type of study and nature of the hypothesis. The acquired data was subjected to several analyses, including the weighted mean, mean, standard deviation, and simple percentage technique and regression analysis.

The level of change management, its dimensions have been measured using a scale where the scores 1-1.99 is considered as Poor, 2-2.99 is considered as Low, 3-3.99 is considered as Moderate and 4 and above is considered as High. The significance of difference based on Gender, University, Experience and Designation has been tested by **ANOVA** and the significance has tested by p value. Also, Scheffe test and Tukey's HSD tests were carried out where significance was noticed.

4.2 Change Management Process

The first part of this chapter consists of the analysis of the components of Change management by using ANOVA. The significant difference has been identified based on p value.

4.2.1 Change Need Identification

The prime and initial step in change management is identifying the need to change. Because it helps to stay updated with the emerging trends. Unless and until the work force recognize the exigency of change, there is no change management.

An understanding of the present state of affairs of the very library in relation to the outer wide world, where outstanding and accomplished libraries reign, would indeed help in anticipating change well in advance. Several studies observed identifying change need as the primary concern during management. Change need was the prime concern for survival of the system in India Post. (Padmaraja, M. U., 2018). The release of the process of organizational change occurs when managers or owners of an organization identify the opportunities present in the environment to perform better (Nadina, 2011). A gender wise analysis of change need identification is represented in table 5

Table 5

Change Need Identification (Gender wise)

Gender	N	Mean	Std. Deviation	T value	P value
Male	105	3.832	0.629	-.577	0.564
Female	161	3.877	0.608		

The gender wise analysis shows that the female library professionals (M=3.877) secured a higher mean score in identifying the change need than male library professionals (M=3.832). Analysis shows that both male and female library professionals are able to identify the 'change need' at a moderate level. As the p value is 0.564, there exist no significant difference in the 'change need' identification of male and female library professionals. In contrary, earlier research shows that gender has an impact on how employees perceive change (Deprez et al., 2012).

Further, the change need identification has been analysed based on universities, and the result is exhibited in table 6

Table 6*Change Need Identification (University Wise)*

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.837	0.586		
MGU	40	3.640	0.816		
SSUS	14	3.771	0.581		
CUSAT	47	3.821	0.642		
KAU	9	3.466	0.707	3.861	0.001
CU	62	4.135	0.407		
KNRU	14	3.885	0.357		
Total	266	3.860	0.616		

The university wise ‘change need’ identification shows that the mean value varies between 3.46 and 4.13. The aggregate mean is 3.86 with standard deviation 0.61. The table indicates that university of Calicut (CU) scored a higher mean value than other universities in the identification of change need, still all other university workforce are also able to identify change need at a moderate level. From the p value obtained, it is clear that there exists a university wise significant difference at one percent level. Hence a Scheffe test also executed in order to find out the significance of variation in the change need identification with respect to universities in relation to each other. And the result is elaborated in table 7

Table 7*Change Need Identification -University wise-Scheffe*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.819	1	1	0.793	0.196	1
MGU	0.819	1	0.998	0.920	0.996	0.012	0.940
SSUS	1	0.998	1	1	0.964	0.644	1
CUSAT	1	0.920	1	1	0.849	0.290	1
KAU	0.793	0.996	0.964	0.849	1	0.136	0.845
CU	0.196	0.012	0.644	0.290	0.136	1	0.916
KNRU	1	0.940	1	1	0.845	0.919	1

The data presented in table 7 clarifies that a variation is found between CU (Calicut university) and MGU (Mahatma Gandhi University) libraries at five percent level as the p value is 0.012 ($p < 0.05$). There is no significant difference in the change need identification between KU (Kerala University) and CUSAT (Cochin University of Science And Technology), MGU (Mahatma Gandhi University), SSUS (Sree Sankaracharya University of Sanskrit), CU (Calicut University), KAU (Kerala Agricultural University) and KNRU (Kannur university) libraries as the p value is 1, 0.819, 1, 0.196, 0.793 and 1 respectively which is greater than 0.05 level. No variation is found between other university libraries as the p value is greater than 0.05.

Again, an experience wise analysis of change need identification has been carried out and the result is shown in table 8

Table 8

Change Need Identification (Experience wise)

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.915	0.554		
11-20 years	114	3.877	0.678	0.682	0.506
Above 20 years	62	3.800	0.582		
Total	266	3.860	0.616		

The table 8 shows the identification of “change need” of employees with different years of experience. It is evident since the aggregate mean is 3.86 on a scale where 5 represents the best possible scale that, the employees in the university libraries are able to identify the need to change at a moderate level.

Here the mean score varies between 3.80 and 3.91 with aggregate mean of 3.86 and standard deviation 0.61. Even though there is a difference in the mean values, the analysis of variance shows that the difference is not statistically significant in the “change need” identification of employees with different years of experience as the p value is above 0.05. Again, a designation wise analysis of change need identification has been done and the result is exhibited in table 9.

Table 9*Change Need Identification (Designation wise)*

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.707	0.619		
Junior Librarians	60	3.843	0.695	4.170	0.016
Professional Assistants	128	3.959	0.556		
Total	266	3.860	0.616		

From the table it is clear that the mean value ranges between 3.70 and 3.95. The aggregate mean is 3.86 with standard deviation 0.61. The table indicates that there exists a designation wise significance difference at five percent level as the p value obtained is 0.016. From the table, it is clear that employees in lower designations are comparatively more competent in the identification of “change need”. And there can be seen a gradual decrease in the change identification as the designation increases. Employees belong to lower designations are comparatively freshers in the libraries. Studies show that freshers often have more technological expertise as they grew in the digital era when comparing to seniors. Hence the new comers are more competent in identifying latest trends and recent changes and developments in the societal environment where they dwell (Bawa & Sethi, 2018). Since change is always associated with latest and new trends, nascent or novel activities, it can be concluded that freshers in the field have more aptitude towards identifying change need.

Since there is a significant difference observed, a Scheffe test also conducted in order to identify the significance of variation among different designations and the data is exhibited in table 10.

Table 10*Change Need Identification -Designation wise-Scheffe*

Designation	Assistant Librarians	Junior Librarians	Professional Assistants
Assistant Librarians	1	0.432	0.017
Junior Librarians	0.432	1	0.477
Professional Assistants	0.017	0.477	1

From the table 10, it is clear that a variation is found between Assistant Librarian category and Professional Assistant category at five percent level as the p value obtained is 0.017 ($P < 0.05$). No variation is found between other categories of designation.

Analysis of the interview with Chief librarians revealed that library considers both internal and external factors while introducing a change in library. The responses of the employees detailed in table 5,6,7,8,9 &10 as well as the responses of university librarians remarked that the “change need identification” of university employees lies at a moderate level. University librarians also indicated that user need assessments are not always carried out before introducing a change initiative. Librarians remarked that expert opinion and staff suggestions are the chiefly depended means in identifying the forthcoming changes in libraries.

4.2.2 Strategy Formulation

It is the approach through which the change is planned and implemented. Adoption of the best suited method which goes along with the mission and vision of the institution is decisive in strategy formulation. Stakeholder support as well as employee participation are two critical pillars in the procedure.

Table 11*Strategy Formulation (Gender wise)*

Gender	N	Mean	Std. Deviation	T Value	P Value
Male	105	3.560	0.822	-0.806	0.421
Female	161	3.648	0.898		

From table 11 it can be seen that the strategy formulation lies at a moderate level in the university libraries in Kerala. As the p value observed is 0.421, it can be concluded that there is no gender wise significant difference in the strategy formulation of university libraries in Kerala.

A university wise analysis on strategy formulation was conducted and the result is exhibited in table 12.

Table 12

Strategy Formulation (University wise)

Name of University	N	Mean	Std. Deviation	F value	P Value
KU	80	3.562	0.874		
MGU	40	3.230	0.866		
SSUS	14	3.214	1.038		
CUSAT	47	3.695	0.890		
KAU	9	2.950	0.846	5.653	0
CU	62	4.026	0.668		
KNRU	14	3.690	0.583		
Total	266	3.611	0.870		

Here the mean score varies between 2.95 and 4.02. The aggregate mean is 3.61 with standard deviation 0.87. As the p value is 0, it can be said that there exists a significant difference at one percent level.

From table 12, it is evident that CU library system lies at a higher level in formulating strategy with mean score 4.02. CUSAT and KNRU comes second level with mean value 3.69 each. KU libraries are in the third position (mean=3.56), MGU comes fourth (Mean=3.23) and SSUS comes fifth (Mean=3.21). Whereas KAU shown a comparatively lower score in formulating strategies for change with a mean score 2.95.

Further a Scheffe test also was conducted to identify the significance of variation in the strategy formulation with respect to the university in relation to each other. The result is exhibited in Table 13.

Table 13

Strategy Formulation -University wise-Scheffe

University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.638	0.99	0.993	0.621	0.093	1.000
MGU	0.638	1	1	0.343	0.991	0.001	0.783
SSUS	0.909	1	1	0.725	0.997	0.093	0.888
CUSAT	0.993	343	0.725	1	0.414	0.637	1.000
KAU	0.621	0.991	0.997	0.414	1	0.042	0.626
CU	0.093	0.001	0.093	0.637	0.042	1	0.929
KNRU	1	0.783	0.888	1	0.626	0.929	1

From the table it can be read that the variation is found at one percent level between MGU and CU libraries as the p value is 0.001 ($p < 0.01$). Again, a difference is observed between CU libraries and KAU libraries at five percent level as the p value obtained is 0.042. ($p < 0.05$). Variation is not found in other universities.

An analysis of strategy formulation for managing change in the library system with different years of experience was conducted and the result is shown in table 14.

Table 14

Strategy Formulation (Experience wise)

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.670	0.866		
11-20 years	114	3.539	0.904	0.701	0.491
Above 20 years	62	3.661	0.813		
Total	266	3.611	0.870		

From the table it is observed that the mean score varies between 3.53 and 3.67. The aggregate mean score is 3.61 with standard deviation 0.87. From the table it can be said that there is no significant difference in the opinion of staff with different years of experience on strategy formulation in the university libraries in Kerala as the p value is 0.49. ($p > 0.05$) As the aggregate mean is 3.61, it can be concluded that the strategy formulation is carried out at a moderate level in the university libraries in Kerala.

The responses of employees regarding strategy formulation in their library systems with different job status has been analysed. And the result is given in Table 15.

Table 15

Strategy Formulation (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.609	0.875		
Junior Librarians	60	3.531	0.878	0.384	0.682
Professional Assistants	128	3.651	0.867		
Total	266	3.611	0.870		

From the table a slight variation in the mean score i.e., between 3.53 and 3.65 can be seen. The aggregate mean is 3.61 with a standard deviation 0.87. From the table it can be concluded that there is no significant difference even at one percent level or at five percent level in the responses of employees regarding strategy formulation with respect to different designations as the p value is 0.682.

Regarding strategy formulation, interview with university librarians indicated that even though a formal methodology for strategy formulations is less used, library is keen in developing vision and strategy for change. Librarians recalled that past experiences were considered and staff participation has been ensured in a moderate way while making strategy for change. Which shows that an informal way of strategy

formulation has been carried out in university libraries. Librarians also specified that stake holders moderately support change and there is a difficulty in convincing the higher authority regarding the urgency of change.

The data presented through tables 11, 12, 13, 14 and 15 along with librarian's responses shows that strategies are formulated at a moderate level in the university libraries in Kerala.

4.2.3 Planning

Planning occupies a pivotal position in the management of change in an institution. Decisions on all the actions, including latest and leading practices to be taken, roles to be assigned, time frame to be set, required skills etc. has to be ensured in the planning phase before implementing the change. A gender wise analysis of planning is exhibited in table 16.

Table 16

Planning Change (Gender wise)

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.696	0.892	0.377
Female	161	3.799	0.956	

From the table it is clear that even though a slight variation can be seen in the means of male (M=3.69) and female(M=3.79) professional staff in the libraries, there is no gender wise significant difference regarding planning procedures carried out in the university libraries in Kerala ($p>0.05$). A university wise analysis of planning has been carried out and the details exhibited through table 17.

Table 17

Planning Change (University wise)

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.788	0.941	7.233	0
MGU	40	3.245	0.980		
SSUS	14	3.337	0.955		
CUSAT	47	3.781	0.960		
KAU	9	2.878	0.890		
CU	62	4.152	0.655		
KNRU	14	4.246	0.458		
Total	266	3.760	0.931		

From table 17 it is evident that the planning procedures are being done at a moderate level in the university libraries in Kerala (mean =3.76). From the table, it can be concluded that in KNRU & CU libraries, planning procedures were carried out in a highly good manner as the mean score is above 4. Whereas KAU library indicated a lower level of planning procedures carried out in their libraries as the mean score is 2.87. A moderate level of planning is observed in all other libraries. The aggregate mean is 3.76 and standard deviation is 0.93. As the p value is zero there exist a university wise significant difference at one percent level in the opinion of employees regarding the planning procedures carried out in their library systems.

Furthermore, a Scheffe test was carried out to find out the significance of variation in the planning procedures with respect to the university in relation to each other and it is shown in table 18

Table 18

Planning Change – University wise-Scheffe

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.116	0.785	1	0.190	0.417	0.771
MGU	0.116	1	1	0.231	0.971	0	0.036
SSUS	0.785	1	1	0.834	0.958	0.131	0.272
CUSAT	1	0.231	0.834	1	0.236	0.566	0.798
KAU	0.190	0.971	0.958	0.236	1	0.012	0.040
CU	0.417	0	0.131	0.566	0.012	1	1
KNRU	0.772	0.036	0.273	0.799	0.040	1	1

From table 18, a variation is found between MGU and CU libraries at one percent level as the p value is 0 ($p < 0.01$). Another variation is found between MGU university and KNRU libraries at five percent level ($p < 0.05$). Moreover, a variation is found between KAU and KNRU libraries at five percent level as the p value is less than 0.05 ($p = 0.040$). Again, difference is observed between KAU and CU libraries at five percent level as the p value is 0.012 ($p < 0.05$).

Table 19*Planning Change (Experience wise)*

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.884	0.936		
11-20 years	114	3.659	0.955		
Above 20 years	62	3.763	0.870	1.476	0.230
Total	266	3.760	0.931		

The table 19 elaborates the experience wise distribution of data regarding the planning process carried out for change. The aggregate mean is 3.76 with standard deviation 0.93 shows that planning process for change is carried out at a moderate level in the university libraries in Kerala. As the p value is 0.23 which is greater than 0.05, it can be said that there is no experience wise significant difference in the responses of employees regarding the planning process carried out for change in their respective libraries.

Further a designation wise analysis was also carried out for detailing the planning procedures taking place in libraries prior to change. And the results are presented in table 20

Table 20*Planning Change (Designation wise)*

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.627	0.957		
Junior Librarians	60	3.757	0.925	1.334	0.265
Professional Assistants	128	3.846	0.917		
Total	266	3.760	0.931		

The analysis shows a slight variation between means. The aggregate mean 3.76 with standard deviation 0.93 indicate a moderate level of planning procedure for change is carried out in libraries. There is no significant difference in the opinion of

employees at different designation regarding planning procedures for change carried out in their libraries as the p value is 0.265.

Analysis of the interview with university librarians underlined that change readiness of employees were assessed in a moderate way before making a change.

The results presented in tables 16, 17, 18, 19, and 20 along with University Librarian's response indicates that planning prior to change is carried out at a moderate level in the university libraries in Kerala.

4.2.4 Change Communication

Effective communication is decisive in change management. Through change communication employees are made aware of the need for change and their roles and responsibilities in achieving it. Additionally, employee apprehensions and fears regarding change are addressed and ambiguity and confusion on change-related matters are clarified through communication.

Table 21

Change Communication (Gender wise)

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.702	0.965	0.207
Female	161	3.850	0.918	

From table 21, it is clear that females (M=3.85) are more contented with the communication carried out during change when comparing to male professionals(M=3.70). Even though a slight variation could be observed in the means, the difference is not statistically significant as the p value obtained is 0.20. Hence there is no gender wise significant difference is observed in the communication regarding change. Further a university wise analysis of communication has been carried out and the result is exhibited through table 22.

Table 22*Change Communication (University wise)*

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.757	0.971		
MGU	40	3.487	1.040		
SSUS	14	3.169	0.970		
CUSAT	47	3.859	0.879	5.162	0
KAU	9	2.958	0.859		
CU	62	4.127	0.752		
KNRU	14	4.205	0.568		
Total	266	3.786	0.940		

The table 22 indicates the communication process taking place during change in different university libraries in Kerala. The mean score value varies between 2.95 and 4.20. The result indicates that the change related matters are communicated at a higher level in KNRU libraries with mean score 4.20. CU comes second (M=4.12), whereas KAU libraries show a lower level of communication with a mean score of 2.95. The aggregate mean is 3.78 with standard deviation 0.94. The aggregate mean 3.78 on a scale where maximum possible score could be 5 indicates that the communication process is overall moderate in university libraries in Kerala. The p value obtained is 0 indicates that there exists a university wise significant difference at one percent level in the communication process during change.

Hence a Scheffe test was employed to identify the position of variation of communication process among universities. The result is exhibited in table 23

Table 23*Change Communication - University wise - Scheffe*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.878	0.532	0.999	0.383	0.438	0.814
MGU	0.878	1	0.971	0.718	0.863	0.060	0.362
SSUS	0.532	0.971	1	0.389	0.999	0.047	0.163
CUSAT	0.999	0.718	0.389	1	0.275	0.881	0.952
KAU	0.383	0.863	0.999	0.275	1	0.042	0.108
CU	0.438	0.060	0.047	0.881	0.042	1	1.000
KNRU	0.814	0.362	0.163	0.952	0.108	1.000	1

It is clear from the Scheffe analysis that the communication process in CU libraries is significantly differs from SSUS libraries at five percent level ($p=0.047$). And a significant difference at five percent level is observed between KAU libraries and CU libraries ($p=0.042$).

An experience wise analysis of change communication has been carried out and the data is exhibited in table 24.

Table 24*Change Communication (Experience wise)*

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.973	0.832		
11-20 years	114	3.608	1.022	4.023	0.019
Above 20 years	62	3.842	0.882		
Total	266	3.786	0.940		

The mean value varies between 3.60 and 3.97 with an aggregate mean 3.78 and standard deviation 0.94. As the p value is 0.01, there exists a significant difference at five percent level.

Furthermore, a Scheffe test also conducted to identify the level of variation of communication and the result is shown in the table 25

Table 25

Change Communication -Experience wise - Scheffe

Experience	Up to 10 years	11-20 years	Above 20 years
Up to 10 years	1	0.022	0.693
11-20 years	0.022	1	0.282
Above 20 years	0.696	0.282	1

It is clear from the Scheffe analysis that the communication process in the category with experience up to 10 years varies from category with experience 11- 20 years at five percent level (P=0.022). Moreover, a designation wise analysis of communication has been conducted and result is exhibited in table 26.

Table 26

Change Communication (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.714	0.933		
Junior Librarians	60	3.700	1.070	1.103	0.334
Professional Assistants	128	3.878	0.871		
Total	266	3.786	0.940		

From table 26, it is visible that the mean value varies between 3.70 and 3.87. Here the p value obtained is 0.33 which means that there is no designation wise significant difference in the change communication as the p value is greater than 0.05.

During the interview with librarians, majority of the University librarians emphasized that employees moderately understand the message communicated to them. But some of the librarians indicated that employees understand the message

communicated to them in the complete sense. Data presented in tables 21 to 26 shows that the communication regarding change is carried out at a moderate level in the university libraries in Kerala.

4.2.5 Resistance Management

Resistance management strategies have to be adopted in libraries so as to minimize resistance and maximise change outputs. The data obtained through gender wise analysis of resistance management has been given in table 27.

Table 27

Resistance Management (Gender wise)

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.315	0.819	0.475
Female	161	3.386	0.759	

From the table it is evident that the p value is 0.47. Which shows that there is no significant difference between male and female library professionals as $p > 0.05$. A slight variation between means also could be observed from the table.

Resistance management strategies adopted in the libraries have been analysed university wise and the results are shown in table 28

Table 28

Resistance Management (University wise)

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.566	0.774	6.935	0
MGU	40	2.933	0.796		
SSUS	14	2.976	0.691		
CUSAT	47	3.283	0.799		
KAU	9	2.629	0.644		
CU	62	3.604	0.619		
KNRU	14	3.523	0.391		
Total	266	3.365	0.773		

The analysis shows that the mean score varies between 2.62 and 3.60 with an aggregate mean of 3.36 and standard deviation 0.77.

From table 28 it can be concluded that the highest mean score of 3.60 recorded against CU libraries and lowest mean score of 2.62 recorded against KAU libraries. The table indicates that the resistance management strategies are practiced at a moderate level in CU (M=3.60), KU (M=3.56), KNRU (M=3.52) and CUSAT (M=3.28) libraries. Whereas resistance management strategies are practiced at a lower level in KAU (M=2.62), MGU (2.93) and SSUS(M=2.97) libraries when comparing to other universities. As the p value is 0, there exists a university wise significance difference at one percent level regarding the resistance management procedures followed in libraries.

A Scheffe test was also conducted to identify the level of variance in the resistance management practices followed in different universities. And the result is elaborated in table 29.

Table 29

Resistance Management -University wise- Scheffe

Name of university	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.003	0.251	0.610	0.039	1	1
MGU	0.003	1	1	0.541	0.972	0.003	0.337
SSUS	0.251	1	1	0.925	0.974	0.204	0.679
CUSAT	0.610	0.541	0.925	1	0.411	0.516	0.978
KAU	0.039	0.972	0.974	0.411	1	0.031	0.221
CU	1	0.003	0.204	0.516	0.031	1	1
KNRU	1	0.337	0.679	0.978	0.221	1	1

From the table 29, it can be noticed that the variation in KU libraries is found significant with MGU libraries at one percent level and with KAU libraries at five percent level. Again, the variation in MGU libraries is found significant with CU

libraries at one percent level. Also, variation observed between KAU libraries and CU libraries at five percent level.

Table 30

Resistance Management (Experience wise)

Experience	N	Mean	Std. Deviation	F Value	P Value
Up to 10 years	90	3.494	0.779		
11-20 years	114	3.282	0.814	1.992	0.138
Above 20 years	62	3.330	0.664		
Total	266	3.365	0.773		

The data from table 30 describes experience wise analysis of resistance management practices followed in the university libraries in Kerala. The mean score varies between 3.28 and 3.49. Only a slight variation could be seen in the opinion of staff with different years of experience regarding their views on resistance management practices followed in their respective libraries. The aggregate mean found is 3.36 and standard deviation 0.77, which indicates that only a moderate level of resistance management practices is followed in university libraries in Kerala. The analysis of variance shows that there is no significance difference in resistance management practices followed in university libraries with respect to different years of experience as the p value is 0.138

Furthermore, an analysis of resistance management practices with that of different designations has been conducted and the result is detailed in the table 31.

Table 31

Resistance Management (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.213	0.812		
Junior Librarians	60	3.369	0.753	2.402	0.093
Professional Assistants	128	3.455	0.748		
Total	266	3.365	0.773		

From table 31, it can be read that the mean score varies between 3.21-.3.45. Here also a slight variation in the opinion of staff with different designations regarding resistance management can be seen. Here the aggregate mean obtained is 3.36 with standard deviation is 0.77 which indicates a moderate level of resistance management practices are followed in university libraries in Kerala. From the analysis it is clear that there is no significant difference in the opinion of staff with different job status regarding resistance management practices followed in their institutions, as the p value is 0.09.

Analysis of the interview with university librarians shows that they experience a difficulty in addressing the fears of workforce regarding change. Majority of the librarians agreed with the fact that rewards and recognition will reduce resistance to change moderately. Few of them disagreed with this perception, while some of them had a neutral opinion. A moderate level of resistance management can be seen from the data exhibited through tables 27, 28, 29, 30&31.

4.2.6 Change Implementation

Implementation is the phase where the planned changes are put into practice. A gender wise analysis of change implementation has been carried out and the result is shown in table 32.

Table 32

Change Implementation (Gender wise)

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.420	0.712	0.715
Female	161	3.455	0.788	

The table indicates that females have a comparatively better opinion about the implementation procedures carrying out in libraries than males in the university libraries in Kerala. Still the difference is not statistically significant as the p value is 0.715.

Additionally, a university wise analysis of change implementation has been carried out and the result is shown in the table 33

Table 33

Change Implementation (University wise)

Name of university	N	Mean	Std. Deviation	F value	P value
KU	80	3.553	0.752		
MGU	40	2.950	0.733		
SSUS	14	3.142	0.896		
CUSAT	47	3.391	0.819	5.554	0
KAU	9	3.064	0.646		
CU	62	3.707	0.638		
KNRU	14	3.583	0.565		
Total	266	3.433	0.770		

Here the mean score varies between 2.95 and 3.70. It is evident that the highest mean score of change implementation (M=3.70) is recorded against CU libraries whereas the lowest mean score of change implementation (M=2.95) is recorded against MGU libraries. Here the aggregate mean is 3.43 with standard deviation 0.77. As the aggregate mean is 3.43, it can be concluded that the change implementation in the university libraries in Kerala are carried out at a moderate level. There exists a university wise significance difference at one percent level in the change implementation as the p value is 0.

Here a Scheffe test has been conducted in order to identify the level of variation. The result is shown in table 34.

Table 34*Change Implementation - University wise -Scheffe*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.007	0.713	0.964	0.732	0.957	1
MGU	0.007	1	0.994	0.255	1	0	0.263
SSUS	0.713	0.994	1	0.974	1	0.348	0.865
CUSAT	0.964	0.255	0.974	1	0.959	0.554	0.994
KAU	0.732	1	1	0.959	1	0.423	0.840
CU	0.957	0	0.348	0.554	0.423	1	0.999
KNRU	1	0.263	0.865	0.994	0.840	0.999	1

From the Scheffe test it can be concluded that a variation is found between KU and MGU libraries at one percentage level as the p value is 0.007. Also, a variation is found between MGU libraries and CU libraries at one percent level as the p value is 0. No variation is found between other university libraries.

The perception of staff about their organization may vary with their experience in the organization. An experience wise analysis regarding change implementation was conducted and the result is elaborated in table 35

Table 35*Change Implementation (Experience wise)*

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.493	0.783	0.449	0.639
11-20 years	114	3.391	0.808		
Above 20 years	62	3.423	0.680		
Total	266	3.433	0.770		

From table 35, it can be seen that the mean score varies between 3.39 and 3.49 with an aggregate mean of 3.43 and standard deviation 0.77. As the p value is 0.63, it is clear that there is no significant difference in the change implementation procedures according to staff with different years of experience.

Again, a designation wise analysis of change implementation has been carried out and the result is presented in the table 36.

Table 36

Change Implementation (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.425	0.798	0.339	0.713
Junior Librarians	60	3.369	0.782		
Professional Assistants	128	3.468	0.750		
Total	266	3.433	0.770		

From table 36, a slight variation in the mean score i.e., between 3.36 and 3.46 can be seen with an aggregate mean of 3.43 and standard deviation 0.77. It is evident from the table that change implementation is carried out in university libraries at a moderate level. From the result of the analysis on change implementation procedures in university libraries in Kerala, it is clear that there is no designation wise significant difference in change implementation as the p value is 0.71.

During the interview, University librarians agreed that world class tools, technology and facilities are available in libraries to implement change. But few of the librarians disagreed with this. Librarians recalled that employees are able to carry out change in a moderate way. Result exhibited from tables 32 to 36 indicates that a moderate level of change implementation activities is carried out in university libraries in Kerala.

4.2.7 Change Evaluation

Evaluation process is essential as it helps in understanding how a change has been implemented and determining if it has met its intended aim. Proper evaluation

at regular intervals ensures the success of change implementation. The analysis of variance is carried out to test the statistical significance of evaluation practices carried out in libraries in the university libraries in Kerala. A gender wise analysis of change evaluation has been carried out and the result is exhibited in table 37.

Table 37*Change Evaluation (Gender wise)*

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.420	0.712	0.715
Female	161	3.455	0.788	

The table shows that female library professionals have a comparatively better mean value regarding change evaluation when comparing to male library professionals. However, the difference is not statistically significant as the p value is 0.715($P > .05$). A university wise analysis of Change evaluation also has been carried out and the obtained result is exhibited in table 38.

Table 38*Change Evaluation (University wise)*

Name of University	N	Mean	Std. Deviation	F Value	P Value
KU	80	3.436	0.835	6.691	0
MGU	40	2.689	0.953		
SSUS	14	2.869	0.834		
CUSAT	47	3.186	0.784		
KAU	9	2.601	0.489		
CU	62	3.457	0.691		
KNRU	14	3.523	0.394		
Total	266	3.231	0.837		

Data presented in the table 38 reveals that the evaluation procedures are taking place at a moderate level in KU, CUSAT, CU and KNRU libraries. In the

case of MGU, SSUS and KAU libraries, the evaluation procedure is being done at a lower level. Remarkably in KNRU libraries the evaluation process stands highest with mean score 3.52 and in KAU libraries, evaluation process stands at the lowest level with mean score 2.60, when comparing to other university libraries. The overall analysis shows that staff agreeing that a moderate level of evaluation process is taking place in the libraries since the aggregate mean score is 3.23 on a rating scale where 5 represents the maximum score. The obtained p value is zero which shows the opinion regarding the evaluation practices followed in libraries differ significantly on the basis of their respective universities at one percent level.

The data is further analysed by using Scheffe test to know the significance of variation in the evaluation practices followed in university libraries in relation to each other. The result of the Scheffe test is presented in table 39.

Table 39

Change Evaluation - University wise - Scheffe

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.001	0.407	0.810	0.175	1	1
MGU	0.001	1	0.997	0.204	1	0.001	0.076
SSUS	0.407	0.997	1	0.941	0.996	0.388	0.567
CUSAT	0.810	0.204	0.941	1	0.657	0.789	0.921
KAU	0.175	1	0.996	0.657	1	0.165	0.282
CU	1	0.001	0.388	0.789	0.165	1	1
KNRU	1	0.076	0.567	0.921	0.282	1	1

The table 39 highlights that in the case of KU libraries variation is found significant at one percent level with MGU libraries. CUSAT, SSUS, KNRU and KAU libraries found no significant variation with any other university libraries. In the case of MGU libraries, a variation is found significant with CU libraries at one percent level as the p value is 0.001.

Additionally, an experience-based distribution of data regarding evaluation of changes is presented in the table 40.

Table 40

Change Evaluation (Experience wise)

Experience	N	Mean	Std. Deviation	F Value	P Value
Up to 10 years	90	3.388	0.858		
11-20 years	114	3.129	0.875		
Above 20 years	62	3.190	0.704	2.518	0.083
Total	266	3.231	0.837		

It is noticeable from table 40 that service up to 10 years of experience category got the highest mean score of 3.38 whereas service between 11- 20 years got the lowest mean score of 3.12. The aggregate mean score is 3.23 with standard deviation 0.83. As the p value is above 0.05, i.e., 0.083, it can be concluded that there occurs no significant difference in the opinion of employees of different years of experience on change evaluation practices carried out in their libraries.

Furthermore, a designation wise analysis of Change evaluation has been carried out and the result is shown in table 41.

Table 41

Change Evaluation (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P Value
Assistant Librarians	78	3.117	0.798		
Junior Librarians	60	3.223	0.884		
Professional Assistants	128	3.315	0.816	1.403	0.248
Total	266	3.231	0.837		

The table indicates that the mean value varies between 3.11 and 3.31. The aggregate mean obtained is 3.23 with standard deviation 0.83. As the p value obtained is 0.24, it can be concluded that there is no designation wise significant

difference is seen in the opinion of employees regarding change evaluation in the university libraries in Kerala.

Result of the interview with university librarians pointed out that the success of change initiative in libraries is mainly assessed through user feedback. The data from tables 37 to 41 indicates that change evaluation procedures are carried out at a moderate level in the university libraries of Kerala.

4.2.8 Change Sustenance

To make the introduced changes permanent, change sustenance needs to be in place. A detailed examination on change sustenance activities have been carried out. A gender wise analysis of change sustenance has been carried out and the result is exhibited in table 42.

Table 42

Change Sustenance (Gender wise)

Gender	N	Mean	Std. Deviation	P Value
Male	105	3.485	0.643	0.273
Female	161	3.581	0.729	

Table 42 clarifies that though female library professionals scored a comparatively better mean value regarding change sustenance activities carried out in libraries, there is no gender wise significant difference is found as the p value is 0.27.

Additionally, a university wise analysis of change sustenance has been carried out and the result is exhibited in table 43

Table 43*Change Sustenance (University wise)*

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.550	0.679		
MGU	40	3.195	0.681		
SSUS	14	3.342	0.871		
CUSAT	47	3.310	0.595	2.991	0.008
KAU	9	3.088	0.679		
CU	62	3.577	0.534		
KNRU	14	3.642	0.305		
Total	266	3.439	0.644		

The table 43 shows that the mean value varies between 3.08 and 3.64 with aggregate mean 3.43 and standard deviation 0.64. Which indicates that the change sustenance activities are carried out at a moderate level in the university libraries in Kerala. Change sustenance activities are carried out at a better level in KNRU libraries comparing to others. The p value obtained is 0.008 shows that there exists a significant difference at one percent level ($p < 0.01$). Hence the data was further analysed utilizing a Scheffe test to identify the significance of variation. The result of the Scheffe test is exhibited in table 44.

Table 44*Change Sustenance - University wise - Scheffe*

Name of Universities	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.060	0.917	0.377	0.368	1	0.999
MGU	0.060	1	0.989	0.979	0.999	0.048	0.255
SSUS	0.917	0.989	1	1	0.965	0.871	0.870
CUSAT	0.377	0.979	1	1	0.961	0.306	0.597
KAU	0.368	0.999	0.965	0.961	1	0.315	0.383
CU	1	0.048	0.871	0.306	0.315	1	1
KNRU	0.999	0.255	0.870	0.597	0.383	1	1

From the table 44 it can be seen that a variation in the change sustenance is found between CU and MGU libraries at five percent level. No variation is found between other university libraries.

Furthermore, an experience wise analysis of change sustenance has been carried out and the result is shown in table 45

Table 45

Change Sustenance (Experience wise)

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.548	0.630		
11-20 years	114	3.407	0.637		
Above 20 years	62	3.338	0.665	2.216	0.111
Total	266	3.439	0.644		

The experience wise analysis of change sustenance shows that the mean value varies between 3.33 and 3.54 with aggregate mean 3.43 and standard deviation 0.64. From the table it is clear that the p value is 0.11 which indicate that there is no significant difference at one percent or five percent level.

Again, a Designation wise analysis of change sustenance has been carried out and the result is explained through table 46

Table 46

Change Sustenance (Designation wise)

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.233	0.662		
Junior Librarians	60	3.540	0.625		
Professional Assistants	128	3.517	0.619	5.848	0.003
Total	266	3.439	0.644		

It is obvious from the designation wise data presented in the table that there is a slight variation in the opinion of staff from different designation regarding change sustenance activities followed in university libraries. Here the p value scored is 0.003 which indicate that there exists a designation wise significant difference in the opinion of employees regarding change sustenance activities of university libraries in Kerala at one percent level. ($p < 0.01$). A Scheffe test is carried out to find the significance of variation among designation. The result of the Scheffe test is given in table 47

Table 47

Change Sustenance -Designation wise - Scheffe

Designation	Assistant Librarians	Junior Librarians	Professional Assistants
Assistant Librarians	1	0.014	0.006
Junior Librarians	0.014	1	0.971
Professional Assistants	0.006	0.971	1

From the table it can be concluded that a variation is found between Junior Librarians and Assistant Librarians category in the change sustenance activities in the university libraries in Kerala at five percent level. ($p < 0.05$). Again, a variation is found between Professional Assistants and Assistant Librarians category at one percent level ($p < 0.01$). From tables 42 to 47, it is clear that change sustenance activities are carried out at a moderate level in the university libraries in Kerala. Interview with University librarians indicated that creating a supportive working environment and monitoring will help in maintaining the introduced change.

4.3 Factors Influencing Change Process

Different factors which influence change process has been analyzed in this section. Here statement wise analysis along with mean values and weighted mean has been used to conduct the analysis.

4.3.1 Internal and External Factors Influencing Change

Libraries and information centres can foresee the forthcoming changes through a thorough environmental analysis. Both the internal and external library environment serve as triggers for transformation (Pathak,2010). These internal and external factors as well as causes influencing change are interrelated and interdependent. A change in one segment may cause a change in other segments and vice versa. A comprehensive analysis has been made on the internal and external factors to change, its frequency, and the mode through which libraries are anticipating the forthcoming changes. The external factors which influence change in the library are presented in table 48.

Table 48

External Factors Influencing Change

Factors	N	Mean	Std. Deviation	Rank
Increased demand for better and faster access to information	266	4.289	0.773	1
Information explosion	266	4.184	0.819	2
Emphasis on web resources	266	4.116	0.849	3
Change in teaching and learning	266	4.071	0.836	4
Emerging new subjects	266	4.045	0.858	5
Universalization of research	266	3.977	0.795	6
Increased emphasis on self-reliance	266	3.924	0.812	7

From table 48, it can be concluded that increased demand for better and faster access to information is the highly decisive external factor which forced libraries to make changes as it scored the highest mean score of 4.28. Information explosion (M=4.18) and emphasis on web resources (M=4.11) are the second and third influencing external factors. From the table it can be comprehended that increased emphasis on self-reliance is the least influencing external factor which forces libraries to change.

Probably changes are happening in various internal segments of the library as well. The following is a detailed statement wise analysis of the frequency of changes which happen in the various internal segments of university libraries in Kerala. And the same is exhibited in table 49.

Table 49*Internal Factors Influencing Change*

Factors	N	Mean	Std. Deviation	Rank
User requirements	266	4.251	0.762	1
Technology	266	4.248	0.854	2
Service	266	4.154	1.047	3
Type of reading material	266	4.135	0.933	4
Staff skill required	266	4.124	0.862	5
Processing of resources	266	4.124	0.879	5
Book selection policy	266	3.958	1.050	6
Retrieval mechanism	266	3.939	1.033	7
Working time	266	3.578	1.153	8
Downsizing of staff by amalgamation	266	3.166	1.159	9

The table 49 indicates that changes are mostly happening in ‘user requirements’ and in ‘technology segments’ in university libraries. From table 48, it is evident that the ‘increased demand for better and faster access to information’ is the mostly decisive external factor. Correspondingly, increased demand from the user community shall be seen in the internal sphere too. ie, ‘changes in the user requirement’ is the mostly visible internal changing segment. From table 48, it is clear that information explosion is the second most influencing external factor. As a result of information explosion, technological advancement takes place. Consequently, the technology segment is the second most changing segment in the internal sphere of libraries. As technological changes happening, changes in the mode of services and access to sources certainly would happen. Hence from the table it can be comprehended that changes in the user requirement as a result of

technological advancement is the first priority concern which libraries should take care of.

Similarly, recent study in the banking sector in Maharashtra indicated that changing customer expectation and freedom of alternative are the strong external factor which cause change (Sangvai,2021). Table 49 again tells that ‘Services’ and ‘Type of reading materials’ are the next two changing segments in libraries.

From the table 49 it can be concluded that ‘downsizing of staff’ is the least happening change in the university libraries in Kerala.

University librarians identified technological change as the most frequently happening change in the university libraries. They agreed that impact of technology changes is reflected in the mode of operation, services provided by libraries, and also in user demands

Different sections in the libraries operate separately with different functions to meet the diversified client requirements. An analysis was conducted to find out the section where frequent changes are happening compared to others. And the same is elaborated in table 50.

Table 50

Frequent Change Happening Sections in the Library

Sections	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU	Weighted Mean	Rank
Digital	14.61	6.57	2.49	11.36	1.79	12.71	2.93	52.46	1
Circulation	12.21	6.25	2.25	6.89	1.36	8.71	2.36	40.03	2
Acquisition	11.54	5.54	2.29	5.82	1.46	9.79	2	38.44	3
Technical	11.61	4.29	2.39	5.96	1.39	9.82	2.32	37.78	4
Reference	10.25	5.89	1.18	5.93	1.39	7.25	154	33.43	5
Maintenance	10.11	6.07	1.68	5.04	0.71	7.75	1.18	32.54	6
Periodicals	9.96	5.75	1.75	6.07	0.89	6	1.68	32.1	7

Weighted means were used to find the result and the result in table 50 indicates that the digital section is the most changing segment in university libraries. Since technology is the identified most changing sector globally, libraries also find digital library section with frequent technological advancements is the most changing segment in libraries. As per the table circulation section comes second and periodical section scores least value when comparing different changing sections in university libraries in Kerala. In this context, the responses of library professionals about the factors causing resistance to changes also needs to be discussed.

4.3.2 Change Obstacles

Resistance to change is a natural reaction to move from the familiar comfort zone. In fact, resistance could backtrack and roll back the change initiative at a rapid rate. Careful examination of the causes and timely redressal is critical.

4.3.2.1 Organizational Obstacles

Organizational challenges are always present, and they are perhaps more severe in public and government supported institutions. The problem is made worse by lack of funding, lack of infrastructure, political prejudices and insufficient work force etc. Organizational obstacles slow down the pace of transformation. To ensure effective change management, organizational obstacles must be kept to a minimum and under control. A gender wise analysis of organizational hurdles is shown in table 51.

Table 51

Organizational Obstacles (Gender wise)

Gender	N	Mean	Std. Deviation	T value	P value
Male	105	3.723	0.605	-1.455	0.147
Female	161	3.841	0.669		

The table 51 shows that female library professionals (M=3.841) scored a higher mean value when comparing to male library professionals (M=3.723). As the

p value is 0.14, which is greater than 0.05, the observed gender wise difference is not statistically significant.

Further a university wise analysis of organizational obstacles has been carried out and the obtained data is presented in table 52.

Table 52

Organizational Obstacles (University wise)

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.850	0.786		
MGU	40	3.654	0.499		
SSUS	14	3.928	0.513		
CUSAT	47	3.748	0.494	2.215	0.042
KAU	9	3.333	0.571		
CU	62	3.774	0.640		
KNRU	14	4.178	0.552		
Total	266	3.788	0.645		

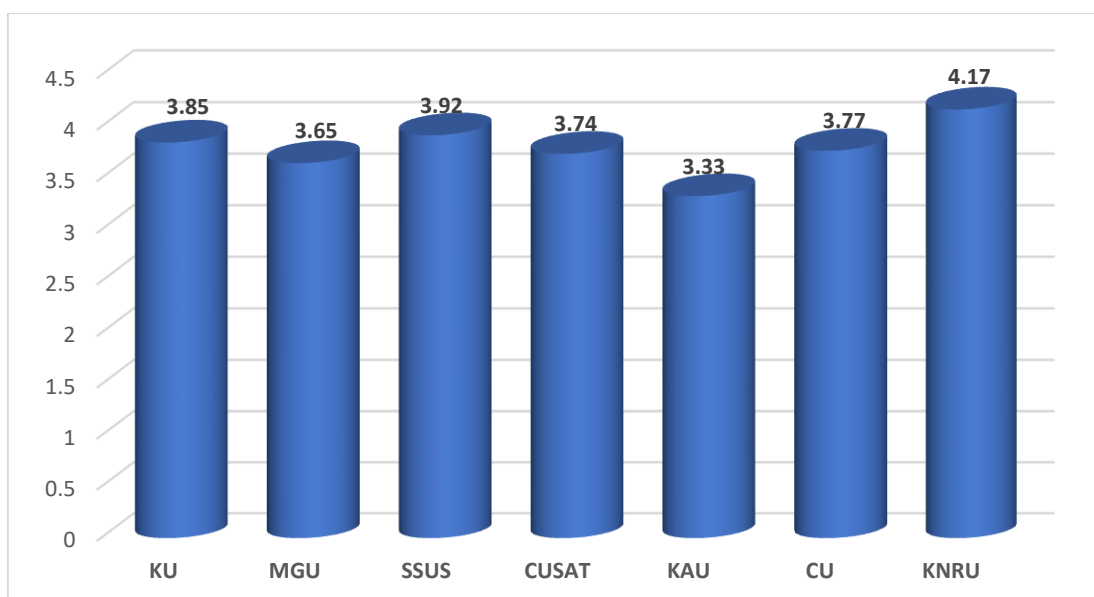
From the table, it can be seen that the mean value varies between 3.33 and 4.17. The aggregate mean 3.78 with standard deviation 0.64 makes clear that organizational obstacles which retrogress change are present at a moderate level in the university libraries in Kerala. From the table it is clear that KNRU libraries are facing organizational obstacles at a higher rate (M=4.17). KAU libraries expressed a comparatively low level of organizational hurdles in their libraries. Here the p value is <0.05 hence a university wise significant difference is observed at five percent level in the response of employees regarding the organizational obstacles present in the university libraries. Therefore, a Tukey's HSD test has been employed to identify the level of variation.

Table 53*Organizational Obstacles -University wise- Tukey's HSD*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.689	1	0.977	0.244	0.992	0.561
MGU	0.689	1	0.808	0.993	0.819	0.967	0.115
SSUS	1	0.808	1	0.967	0.305	0.983	0.944
CUSAT	0.977	0.993	0.967	1	0.555	1	0.288
KAU	0.244	0.819	0.305	0.555	1	0.454	0.034
CU	0.992	0.967	0.983	1	0.454	1	0.328
KNRU	0.561	0.115	0.994	0.288	0.034	0.328	1

From the Tukey's test result in table 53 it can be concluded that a variation is found between KNRU libraries and KAU libraries at five percent level as the p value obtained is 0.034 which is < 0.05 . No variation is found between any other university libraries.

Organizational obstacles in the university libraries have been explained with figure 6 also.

Figure 6*Organizational Obstacles*

From the figure it is evident that Kannur university libraries experience more organizational obstacles and KAU libraries experience lesser organizational obstacles comparing to others.

Table 54

Organizational Obstacles (Experience wise)

Experience	N	Mean	Std. Deviation	F-value	P value
Up to 10 years	90	3.751	0.726		
11-20 years	114	3.801	0.618		
Above 20 years	62	3.844	0.564	0.385	0.681
Total	266	3.788	0.645		

Experience wise analysis of Organizational obstacles is presented in table 54, discloses that the mean score varies between 3.75 and 3.84. The highest mean score of organizational obstacles is recorded against employees with longer years of experience. And lowest mean score recorded against professionals with lesser years of experience.

The data presented in the table exhibits that the aggregate mean is 3.78 with standard deviation 0.64. The aggregate mean score 3.79 on a scale where maximum score attained is 5 shows that organizational obstacles moderately exist in the libraries which retrogress change. There is no experience wise significant difference is observed as the p value is above 0.05. In order to identify the most critical organizational resistance to change, a statement wise analysis of the organizational obstacles has been carried out and the result is represented in table 55

Table 55*Statement wise Analysis of Organizational Obstacles*

Organizational Obstacles	Strongly Agree	Agree	Neither Agree nor Dis agree	Dis Agree	Strongly Dis agree	Total	Mean	Std. Deviation
Insufficient fund	106 (39.85)	115 (43.23)	29 (10.90)	11 (4.14)	5 (1.88)	266	4.150	0.906
Lack of infrastructure	93 (35.00)	128 (48.1)	28 (10.5)	15 (5.6)	2 (0.8)	266	4.109	0.859
Attitude of authority	58 (21.8)	133 (50)	50 (18.8)	23 (8.6)	2 (0.8)	266	3.834	0.891
Insufficient man power	65 (24.4)	116 (43.6)	25 (9.4)	42 (15.8)	18 (6.8)	266	3.631	1.203
Politics in the institution	55 (20.7)	99 (37.2)	71 (26.7)	33 (12.4)	8 (3.0)	266	3.601	1.042
Attitude of staff	42 (15.8)	114 (42.9)	54 (20.3)	38 (14.3)	18 (6.8)	266	3.466	1.122

The table shows that insufficient funds (M=4.15) is the most critical organizational obstacle which the workforce face as a hindrance to change. Even Though Good ideas, vision and dedicated workforce are ready, without sufficient financial background, it is not possible to yield the planned goal.

Lack of infrastructure (M=4.10) is the second most dangerous organizational obstacle to change. Attitude of authority and insufficient manpower occupies the next two places with mean 3.83 and 3.63 respectively. Politics in the institution comparatively play a minor role in organizational resistance. Attitude of staff is the least scored organizational hurdle which indicates that employees have a positive attitude towards change.

In a research study (Ruchi,2016) conducted in the university libraries of Delhi, Haryana and Punjab also identified lack of finance as the primary stumbling block in the path of change. Meeradevi (2019) in a study identified shrinking budget as the chief barrier in the management of change.

4.3.2.2 Personal Obstacles

Personal resistance happens when employees resist change based on their individual sensitivity, point of view, traits, needs etc. In this study personal obstacles which cause resistance include fear of change, lack of skill, fear of losing power, fear of overload work, fear of financial loss, lack of education and training and fear of losing recognition. A gender wise analysis of personal obstacles has exhibited in the table 56

Table 56

Personal Obstacles (Gender wise)

Gender	N	Mean	Std. Deviation	T value	P value
Male	105	2.971	0.702	-0.686	0.493
Female	161	3.041	0.882		

The table 56 shows that female library professionals (M=3.04) scored a higher mean value in the personal obstacles when compared to male library professionals (M=2.97). But the difference is not statistically significant as the p value is 0.493. An experience wise analysis of personal obstacles has been carried out and the result is presented in table 57.

Table 57

Personal Obstacles (Experience wise)

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 years	90	3.238	0.812	4.863	0.008
11-20 years	114	2.912	0.847		
Above 20 years	62	2.914	0.702		
Total	266	3.023	0.815		

Experience based data related to personal obstacles presented in table 57 indicates that the mean score varies in a range between 2.91-3.23. The highest mean

score of 3.23 recorded against professionals having experience up to 10 years. Which means professionals with lesser years of experience have more personal resisting factors than others. This may be because freshers lack experience and have only limited understanding of the dynamics of the institution when comparing to others. The other two categories have a mean score of 2.91 each. Orientations and special training for freshers must be designed in libraries in order to equip freshers with ample skill to handle the change in their respective libraries.

The analysis of data related to personal obstacles reveals that the aggregate mean score is 3.02 with a standard deviation of 0.81. The aggregate mean score of 3.02 in a scale where maximum attainable score is five indicates that a moderate level of personal resisting factors which backtrack change processes exists in the university libraries in Kerala.

The analysis of variance shows that the difference is significant at one percent level as the p value is 0.008. ($p < 0.01$). The data is further analysed by using Scheffe test to know the level of significance of variation in identifying the personal obstacles with different years of experience. The result of the Scheffe test is presented in the table 58

Table 58

Personal Obstacle -Experience wise -Scheffe

Experience	Up to 10 years	11-20 years	Above 20 years
Up to 10 years	1	0.017	0.053
11-20 years	0.017	1	1
Above 20 years	0.053	1	1

The table 58 indicates that variation in the category with experience up to 10 years is only found significant with experience between 11-20 years at five percent level as the p value is 0.017. A designation wise analysis of personal resisting factors also conducted and the result is expressed in table 59

Table 59*Personal Obstacles (Designation wise)*

Designation	N	Mean	Std. Deviation	F-value	P-value
Assistant Librarians	78	2.838	0.703		
Junior Librarians	60	3.228	0.861	4.007	0.019
Professional Assistant	128	3.039	0.838		
Total	266	3.023	0.815		

The analysis of data related to personal obstacles with different designation is presented in the table 59. From the table, it can be seen that the mean score varies between a range of 2.83-3.22 with an aggregate mean of 3.02 and standard deviation 0.81.

The analysis of data pertaining to the personal obstacles indicates that university library professionals of different job status have personal resisting factors to a moderate level as the aggregate mean score is between 3 and 4. The highest mean score of 3.22 regarding personal resisting factors recorded against Junior Librarian category whereas the lowest mean score of 2.83 recorded against the Assistant Librarian category. The analysis of variance shows that the difference is significant at five percent level as the p value is 0.019.

Furthermore, a Scheffe test was conducted to identify the variation in the personal obstacles with respect to different job status. The result of the Scheffe test is presented in the table 60

Table 60*Personal Obstacles -Designation wise- Scheffe*

Designation	Assistant Librarians	Junior Librarians	Professional Assistants
Assistant Librarians	1	0.020	0.227
Junior Librarians	0.020	1	0.325
Professional Assistants	0.227	0.325	1

The data from table 60 shows that the variation in personal obstacles found between Assistant Librarian category and Junior librarian category at five percent level as the p value is 0.02. Whereas in the case of Professional assistants, variation is not found significant even at one percent or at five percent level with Assistant Librarians category or Junior Librarians category. Additionally, a university wise analysis of personal obstacles has been conducted and the data is exhibited in table 61

Table 61

Personal Obstacles (University wise)

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.264	0.892		
MGU	40	3.339	0.738		
SSUS	14	2.653	0.692		
CUSAT	47	2.753	0.628		
KAU	9	2.555	0.470	4.935	0
CU	62	2.836	0.855		
KNRU	14	3.112	0.580		
Total	266	3.023	0.815		

Here the mean score varies between 2.55 and 3.33 with aggregate mean 3.02 and standard deviation 0.81.

From the table, it is observed that MGU libraries have the highest mean score of 3.33 and KAU library has the lowest mean score of 2.55. Which indicates that MGU university professionals facing more personal obstacles (mean =3.33) followed by KU and KNRU libraries compared to other university libraries. Whereas KAU libraries have comparatively less personal resisting issues (mean=2.55) among employees in times of change.

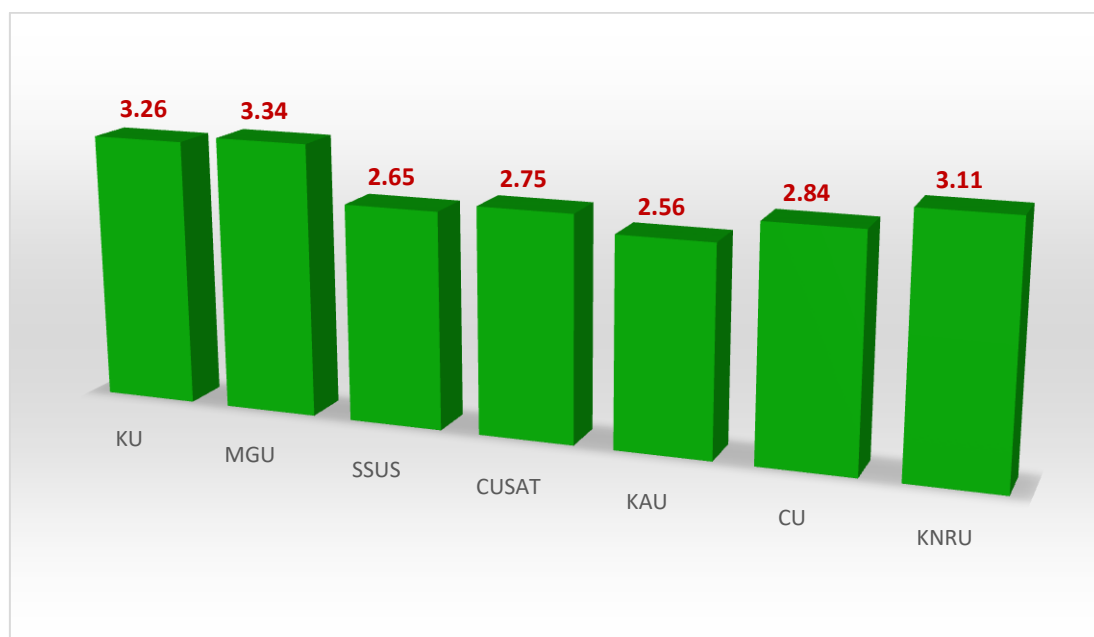
As the p value is 0, there exists a university wise significance difference in the personal obstacles at one percent level. Here a Tukey's HSD test is employed to identify the variation in the personal obstacles with respect to different universities. And the data is presented in table 62.

Table 62*Personal Obstacles-University wise – Tukey's HSD Test*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.999	0.105	0.008	0.140	0.024	0.994
MGU	0.999	1	0.076	0.011	0.100	0.029	0.967
SSUS	0.105	0.076	1	1	1	0.986	0.715
CUSAT	0.008	0.011	1	1	0.993	0.998	0.744
KAU	0.140	0.100	1	0.993	1	0.953	0.642
CU	0.024	0.029	0.986	0.998	0.953	1	0.898
KNRU	0.994	0.967	0.715	0.744	0.642	0.898	1

From the table it is clear that there exists a variation between KU and CUSAT libraries at one percent level ($P < 0.01$) Also a variation is found between KU and CU libraries at five percent level ($P < 0.05$). Another variation is found between CUSAT and MGU libraries at five percent level. ($p < 0.05$). A variation at five percent level has been found between CU and MGU libraries. No variation is found between KNRU, SSUS and KAU libraries with any other University libraries.

The figure 7 shows the personal obstacle in the university libraries in Kerala

Figure 7*Personal Obstacles*

From the figure 7, it is clear that M.G. university library professionals experience more personal obstacles and KAU library professionals experience less personal resisting issues while managing change. Additionally, a statement wise analysis has been carried out in order to find out the most burdensome personal resisting factor to change the statistics is exhibited in table 63.

Table 63*Statement wise Analysis of Personal Obstacles*

Statements	Strongly Agree	Agree	Undecided	Dis agree	Strongly Disagree	Mean	Std. Deviation
Fear of unknown change	45 (16.9)	104 (39.1)	48 (18.0)	61 (22.9)	8 (3.0)	3.439	1.108
Lack of skill	43 (16.2)	83 (31.2)	51 (19.2)	73 (27.4)	16 (6.0)	3.240	1.192
Lack of education and training	45 (16.9)	79 (29.7)	48 (18.0)	80 (30.1)	14 (5.3)	3.229	1.199
Fear of overload work	24 (9.0)	71 (26.7)	49 (18.4)	100 (37.6)	22 (8.3)	2.906	1.153
Fear of losing power	20 (7.5)	60 (22.6)	58 (21.8)	110 (41.3)	18 (6.8)	2.829	1.091
Fear of financial loss	20 (7.5)	56 (21.1)	65 (24.4)	104 (39.1)	21 (7.9)	2.812	1.089
Fear of losing recognition	15 (5.6)	54 (20.3)	61 (22.9)	108 (40.6)	28 (10.5)	2.699	1.081

This statement wise analysis of personal obstacles has been conducted in order to identify, which personal resisting factors are a critical threat to change so that it could be addressed and minimised. The test result is tabulated in table 63. From the table it can be concluded that fear of the unknown change is the most serious threat that the employees face while going through the change process (M=3.43). Lack of skill followed by lack of education and training are the next level causes of personal resistance among employees in the university libraries in Kerala.

A similar study in the department of posts also revealed that majority of the employees have not been given sufficient training during change. (Padmaraja, M. U., 2018). Fear of losing recognition(M=2.69) and fear of financial loss (M=2.81) are the two least scored factors of personal obstacles.

University Librarians admitted that resistance often disturbs change in the university libraries in Kerala and they are aware of the presence of implicit resistors in their respective libraries.

Tables 51 to 63 shows that change obstacles are present at a moderate level in the university libraries in Kerala.

4.3.3 Leadership During Change

Leader has a prominent role during change. The role of the leader is crucial in steering and guiding the entire community towards change. A leader plays a significant part in developing a strategy, he is held accountable, and serves as a mediator for communications with both stakeholders and with the workforce. A leader is more likely to encourage change, be committed to it, and be willing to take chances. They also give credit for the assignments carried out well. Moreover, followers have faith in the leadership. The leadership style prevailing in the university libraries have been analysed here with different classificatory variables.

At first a university wise analysis on the leadership during change was carried out and the result is exhibited in the table no. 64

Table 64

Leadership (University wise)

Name of University	N	Mean	Std.Deviation	F value	P value
KU	80	3.766	0.851		
MGU	40	3.296	1.120		
SSUS	14	3.336	1.094		
CUSAT	47	3.486	1.064	0.457	0
KAU	9	2.936	1.012		
CU	62	4	0.688		
KNRU	14	3.989	0.271		
Total	266	3.661	0.940		

The university wise analysis on the leadership during change was studied and the result indicates that the mean value varies between 2.93 and 4. CU libraries pointed out a positively higher level of leadership observed in their libraries. KAU libraries found out that their leadership lies at a comparatively lower level when compared to other university libraries. In all other university libraries, a moderate level of leadership is observed. The p value is 0 indicates that there exists a university wise significant difference in the leadership at one percent level and a Scheffe test also executed to find out the variation among universities.

Table 65

Leadership -University wise- Scheffe

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.308	0.847	0.829	0.343	0.886	0.994
MGU	0.308	1	1	0.987	0.978	0.025	0.416
SSUS	0.847	1	1	1	0.982	0.411	0.724
CUSAT	0.829	0.987	1	1	0.834	0.201	0.765
KAU	0.343	0.978	0.982	0.834	1	0.098	0.288
CU	0.886	0.025	0.411	0.201	0.098	1	1
KNRU	0.994	0.416	0.724	0.765	0.288	1	1

The university wise Scheffe test indicates that a variation is found between CU and MGU libraries at five percent level as the p value observed is 0.025. ($p < 0.05$).

Again, leadership has been analysed with years of experience and the result is shown in table 66

Table 66

Leadership (Years of Experience)

Experience	N	Mean	Std. Deviation	F Value	P Value
Up to 10 years	90	3.784	0.856		
11-20 years	114	3.592	0.980		
Above 20 years	62	3.652	0.928	1.087	0.339
Total	266	3.661	0.940		

Data relating to leadership during change with different years of experience is given in the table 66. There found a slight variation in mean score as they vary between 3.59 and 3.78. The aggregate of mean score 3.66 with standard deviation 0.94 indicates that a moderate level of positive leadership is present during times of change. It is crystal clear from the analysis that no significant difference is found in the leadership during change with different years of experience as the p value is greater than five percent level.

Additionally, the responses of employees regarding leadership have been analysed across different designations and the findings shown in table 67

Table 67

Leadership (Designation wise)

Designation	N	Mean	Std. Deviation	F Value	P Value
Assistant Librarians	78	3.439	1.058		
Junior Librarians	60	3.714	0.919		
Professional Assistants	128	3.762	0.875	2.986	0.052
Total	266	3.661	0.940		

The table 67 shows that the mean score varies between 3.43 and 3.76, and the aggregate mean is 3.66 with standard deviation 0.94. which indicates that staff working in different job status agree that a moderate level of leadership is occurred during change. There is no designation wise significant difference in the leadership during change as the p value is >0.05 i.e., 0.052.

4. 4 Communication Pattern

How the communication regarding change is being taking place has a decisive role in achieving the change initiatives. The mode through which the communications are transmitted, the appropriateness and relevancy of communication and examination on whether the change communications have been attained the intended result help work force to perform better.

4.4.1 Change Communication -Statement wise

In order to identify the communication pattern in detail, a statement wise analysis of the responses of employees to the statements regarding communication they received during change also have been carried out and the data is exhibited in table 68.

Table 68

Change Communication -Statement wise

Statements	N	Mean	Std.Deviation
Need for change clearly communicated	266	3.966	1.096
Informed about their roles in and after change	266	3.868	1.169
Library authority listens to staff concerns	266	3.830	1.141
Staff doubts were timely clarified	266	3.827	1.060
The content of message was relevant to the proposed change	266	3.774	1.085
I'm getting communication on time	266	3.714	1.213
Library makes sure that the messages are reaching employees and being understood.	266	3.714	1.213
I'm satisfied with the level of information communication conversed to me	266	3.657	1.190

The table 68 exhibits an imperceptible discrepancy in the statements regarding change communication. Even Though, the statements reveal that the employees agreed that the need for change is clearly communicated (M=3.96) as it scored the highest mean. Whereas the statement 'I'm satisfied with the level of information communication conversed to me' scored the least mean (M=3.65). As well as time bound communication and measures to make sure that messages are reaching to and being understood by employees also scored comparatively less means (3.71 each). From the table, it can be concluded that 'change communication' is taking place in libraries though the level of communication needs to be improved. As well as authorities must make sure that the messages are reached to employees

timely and being understood by them as per the change needed. Furthermore, a detailed account of the means of communication have been carried out.

4.4.2 Means of Communication

Different purposes make use of different means of communication to transform information. An analysis has been done to know the various means used in university libraries to communicate change. And the results are presented in table 69.

Table 69

Means of Communication

Means of communication	Always	Some Times	Can't Say	Rarely	Never	Total	Mean	Std.Deviation
Face to Face-Meeting	71 (26.69)	141 (53.00)	26 (9.77)	19 (7.14)	9 (3.38)	266	3.924	0.976
Written	73 (27.44)	128 (48.12)	18 (6.77)	2 (13.91)	10 (3.76)	266	3.815	1.098
Face to Face-Personal	60 (22.6)	141 (53.00)	21 (7.89)	30 (11.3)	14 (5.3)	266	3.763	1.085
Over Phone	55 (20.67)	55 (20.67)	26 (9.77)	36 (13.53)	18 (6.76)	266	3.634	1.153
E-Mail	64 (24.06)	116 (43.60)	28 (10.52)	30 (11.27)	30 (11.27)	266	3.594	1.259
WhatsApp	47 (17.66)	125 (46.99)	32 (12.03)	35 (13.15)	27 (10.15)	266	3.488	1.216
SMS	21 (7.89)	93 (34.96)	47 (17.66)	46 (17.29)	58 (21.80)	266	2.898	1.308
Video Conferencing	15 (5.63)	87 (32.70)	37 (13.90)	56 (21.05)	70 (26.31)	266	2.7481	1.517

The table 69 elaborates the means of communications received from authority regarding change in the library

It is evident from the table that, mainly change communication is taking place through meetings, as it is recorded the highest mean score (3.92). It is a very good practice as in a meeting a wider community is present and it is easier for both the authority and for the workforce to exchange their views and ideas regarding change. Sometimes many may have the same doubts and concerns regarding change. When the issues are raised in a common meeting, it is comparatively effortless for the

authority to address and resolve it openly. And authority gains a wider perspective and broader understanding of the proposed change, and of course of the alternatives present. When the decisions are taken in a common meeting, it will get a wider acceptance and less resistance.

Written communication occupies the second position with a mean score 3.81. Written communication ensures that the messages have been communicated to and received by the workforce timely. Personal one-to-one meeting lies in the third position with a mean score 3.76. SMS and Video conferencing are the least utilized means of communication in the university libraries of Kerala during change with mean scores 2.89 and 2.74 respectively.

4.5 Change Management Index

A total change management analysis has been done in order to make out the level of change management prevalent in different university libraries in Kerala. The change management index is the totality of all the components of change management and the factors influencing change process of selected seven universities. It has been calculated by using simple arithmetic mean formula. The table 70 shows a gender wise analysis of change management procedures followed in university libraries in Kerala.

Table 70

Change Management Index (Gender wise)

Gender	N	Mean	Std. Deviation	F Value	P value
Male	105	3.100	0.582		
Female	161	3.181	0.557	-1.143	0.254
Total	266	3.149	0.567		

From the table it can be seen that there is no significant gender difference found in the change management practices followed in the university libraries in Kerala, as the p value is 0.25.

Again, a university wise analysis of change management has been carried out and the results is shown in table 71.

Table 71.

Change Management Index (University wise)

Name of University	N	Mean	Std. Deviation	F value	P value
KU	80	3.200	0.565		
MGU	40	2.845	0.595		
SSUS	14	2.847	0.631		
CUSAT	47	3.143	0.603	6.995	0
KAU	9	2.603	0.460		
CU	62	3.387	0.406		
KNRU	14	3.346	0.224		
Total	266	3.149	0.567		

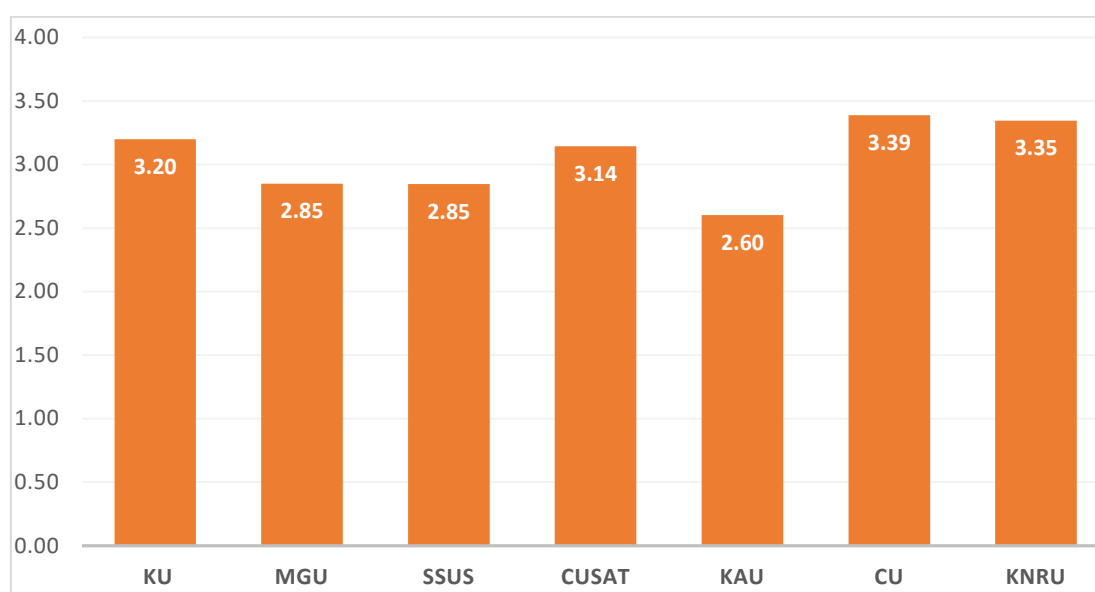
The table 71 shows the overall change management of university libraries in Kerala. Here the mean value varies between 2.60 and 3.38, with an aggregate mean 3.14 and standard deviation 0.56. Which means the change management techniques are practiced in university libraries in Kerala at a moderate level. From the table it is clear that among the seven universities, CU libraries stands at a comparatively higher level with mean value 3.38. KNRU occupies the second position with mean value 3.34. and KAU libraries scored the least mean value (2.60). Since the p value is 0, there exists a significant difference at one percent level in the change management of university libraries in Kerala. Hence a Scheffe test is also executed in order to find out the level of variance. The result obtained through the Scheffe test is exhibited in table 72.

Table 72*Change Management Index - University wise – Scheffe*

Name of University	KU	MGU	SSUS	CUSAT	KAU	CU	KNRU
KU	1	0.071	0.517	0.999	0.123	0.635	0.989
MGU	0.071	1	1	0.348	0.957	0	0.169
SSUS	0.517	1	1	0.766	0.979	0.073	0.410
CUSAT	0.999	0.348	0.766	1	0.260	0.471	0.954
KAU	0.123	0.957	0.979	0.260	1	0.011	0.104
CU	0.635	0	0.073	0.471	0.011	1	1
KNRU	0.989	0.169	0.410	0.954	0.104	1	1

From the table it is evident that a variation is found between CU and MGU libraries at one percentage level. Also, a variation is found between CU and KAU libraries at five percent level. No variation is found between other university libraries.

The university wise analysis of Change management index has been explained with the help of figure 8

Figure 8*Change Management Index*

Further an experience wise analysis of Change management index has been carried out and the output is presented in table 73

Table 73*Change Management Index (Experience wise)*

Experience	N	Mean	Std. Deviation	F value	P value
Up to 10 Years	90	3.257	0.536		
11- 20 Years	114	3.075	0.609		
Above 20 Years	62	3.129	0.513	2.685	0.070
Total	266	3.149	0.567		

From the table it can be concluded that the mean value varies between 3.07 and 3.25. Here the aggregate mean obtained is 3.14 with standard deviation 0.56. Since the p value obtained is 0.07, it can be concluded that there is no experience wise significant difference in the opinion of employees regarding change management practices followed in the university libraries in Kerala. Further a Designation wise analysis of Change management index have been carried out and the result is shown in table 74.

Table 74*Change Management Index (Designation wise)*

Designation	N	Mean	Std. Deviation	F value	P value
Assistant Librarians	78	3.051	0.599		
Junior Librarians	60	3.137	0.578		
Professional Assistants	128	3.215	0.537	2.056	0.130
Total	266	3.149	0.567		

From the table, it can be seen that the mean value varies between 3.05 and 3.21. The aggregate mean obtained is 3.14 with standard deviation 0.56. The p value obtained is 0.130 indicates that there is no significant designation wise difference in the opinion of employees regarding Change management practices followed in the university libraries in Kerala.

4.6 Areas Needed Improvement in the Management of Change

In order to identify the weaker areas which need improvement in the management of change, a detailed and separate component wise analysis have been conducted in selected universities. The mean value of each component has been calculated and compared so that the feeble areas as well as the reasons behind could be identified. This may help in executing proper redressal measures in the respective areas.

4.6.1 Management of Change- KU Libraries

Table 75

Management of Change- KU Libraries

Components	Mean value
Change need identification	3.837
Strategy Formulation	3.562
Planning	3.788
Communication	3.757
Resistance management	3.566
Implementation	3.553
Evaluation	3.436
Change sustenance	3.550

The mean values obtained for each component of change management in the KU libraries are given in table 75. From the Table, it is obvious that evaluation and change sustenance have got the least mean values. Which means in KU libraries, the process involved in evaluation and change sustenance needs to be improved. By going through the item wise analysis of components of evaluation and change sustenance of Kerala university library system, (Appendix I item no. 55& 59) it can be seen that the responses ‘authority accept negative feedback’ and ‘employees could be made accountable for not making a change’ have scored lowest means. It can be concluded that acceptance of negative feedback would make the evaluation process more meaningful in KU libraries. Making employees responsible for the task

assigned to them is also needs to be given importance to improve the evaluation process in the libraries of university of Kerala. Absence of positive reinforcement (Appendix I item no. 64) is the critical aspect which needs to be addressed in KU library system to make better the change sustenance activities.

4.6.3 Management of Change– MGU Libraries

Table 76

Management of Change– MGU Libraries

Components	Mean
Change need Identification	3.640
Strategy formulation	3.230
Planning	3.245
Communication	3.487
Resistance management	2.933
Implementation	2.950
Evaluation	2.689
Change Sustenance	3.195

The mean value obtained for different components of Change management have been given in table 76. From the table it is apparent that evaluation, resistance management and implementation have got lowest mean scores. By analysing the item wise analysis of statements (Appendix I item nos. 60&61), it is clear that libraries should be more careful in effectively take corrective actions on underperformed employees and greater attention should be paid to reviews and rectifications as per feedback in order to refine evaluation procedures in MGU libraries.

Proper training and guidance to handle the change as well as addressing the apprehensions regarding change in a more tangible way are the two aspects which needs attention (Appendix I item nos. 36 &37) so that resistance management activities shall be refined in MGU libraries.

The statement 'During implementation of plan, the difficulties were addressed properly' has got least mean score (Appendix I item nos. 44& 47) which means a more effective approach to deal with strain and problems during implementation needs to be in place. At the same time the consistency in the co-ordination and co-operation of various internal units also needs to be improved so that the implementation phase could be done more effectively in MGU libraries.

4.6.4 Management of Change–SSUS Libraries

Table 77

Management of Change–SSUS Libraries

Components	Mean
Change need Identification	3.771
Strategy formulation	3.214
Planning	3.337
Communication	3.169
Resistance management	2.976
Implementation	3.142
Evaluation	2.869
Change Sustenance	3.342

From the table 77, it can be seen that evaluation and resistance management are the two areas which scored least mean values and hence need improvement in SSUS libraries. By going through the statement wise analysis, (Appendix I item nos. 56 & 57) it is clear that giving priority to user feedback while assessing the success of change will make the evaluation process more worthwhile in SSUS libraries. Evaluation process in SSUS libraries could also be enhanced by applying step by step periodic evaluation.

By proper redressal of apprehensions regarding change and also by more functional and effective training and guidance, the resistance in SSUS libraries can be managed in a better way (Appendix I item no. 36 & 37)

4.6.2 Table 78 Management of Change– CUSAT Libraries

Table 78

Management of Change– CUSAT Libraries

Components	Mean Value
Change need identification	3.821
Strategy Formulation	3.695
Planning	3.781
Communication	3.859
Resistance management	3.283
Implementation	3.391
Evaluation	3.186
Change sustenance	3.310

From the mean value presented in the table 78, it is clear that, Evaluation and Resistance management are the two areas which scored least mean values and needs improvement in CUSAT libraries.

It is clear from item wise analysis (Appendix I nos. 59 & 63) that employee could be made accountable for not making a change and making the introduced change as the new way of working will fine tune the evaluation phase in the CUSAT libraries.

From the item wise analysis (appendix I item nos. 37& 35) it is understandable that the apprehensions of employees regarding change should be addressed in a more tangible way to improve the resistance management activities in CUSAT libraries. Proper communication regarding benefits of change also helps in reducing resistance in CUSAT libraries

4.6.7 Management of Change -KAU Libraries

Table 79

Management of Change -KAU Libraries

Components	Mean
Change need Identification	3.466
Strategy formulation	2.950
Planning	2.878
Communication	2.958
Resistance management	2.629
Implementation	3.064
Evaluation	2.601
Change Sustenance	3.088

From the table 79, it is clear that evaluation and resistance management are the two areas which require immediate redesigning and streamlining in the management of change in the KAU library system. The item wise analysis exhibited in the appendix I (item nos. 57& 63) indicates that libraries should ensure step by step periodic evaluation at every stage of change as well as measures should be more strengthened to make the introduced change to become mainstream way of working to secure proper evaluation in the KAU library system.

Reduced resistance in KAU library system could be achieved by proper recognition of good work and initiatives as well as providing plenty of opportunity to employees to express and present their opinion in library meetings or on official platforms (Appendix I item nos. 38 & 39)

4.6.5 Table 80 Management of Change – CU Libraries

Table 80

Management of Change – CU Libraries

Components	Mean
Change need Identification	4.135
Strategy formulation	4.026
Planning	4.152
Communication	4.127
Resistance management	3.604
Implementation	3.707
Evaluation	3.457
Change Sustenance	3.577

From the table 80, it is clear that evaluation and change sustenance are the areas which needs improvement in the CU libraries. From the item wise analysis (Appendix I item nos. 55, 58 & 60) it is evident that giving more acceptance to negative feedback from employee side shall improve the evaluation process in CU libraries. Taking corrective actions more seriously on underperformed employees and assessing the performance of employees in a more meaningful way also shall help to enhance evaluation in the libraries of university of Calicut.

More positive reinforcement as well as intensified measures to make the introduced change to become the integrated way of working (Appendix I item. nos. 64&68) could help in enhancing the change sustenance activities in the library system of university of Calicut.

4.6.6 Management of Change- KNRU Libraries

Table 81

Management of Change- KNRU Libraries

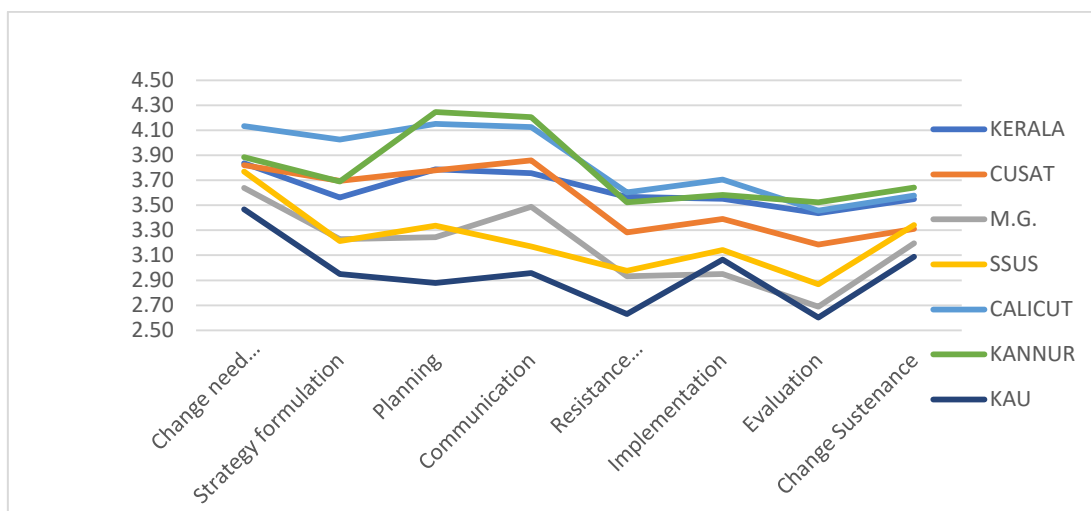
Components	Mean
Change need Identification	3.885
Strategy formulation	3.690
Planning	4.246
Communication	4.205
Resistance management	3.523
Implementation	3.583
Evaluation	3.523
Change Sustenance	3.642

From the table 81 it is visible that resistance management and evaluation are the components which needs immediate improvement in the KNRU libraries. The item wise analysis exhibited in the appendix I (item no. 36) reveals that training and guidance to handle the change should be more effectively designed to minimise resistance from employees. The acceptance of negative feedback from authority (Appendix item no. 55) would help in making evaluation process appropriate in KNRU library system.

The following figure 9 shows the component wise data of mean values of change management in each university

Figure 9

Components of Change Management (University wise)



From the data presented in the figure 9, it is clear that the latter part of procedures involved in the change management process needs more improvement comparing procedures involved in the first part. From the figure it is obvious that evaluation and resistance management are the areas which require immediate improvement in the university libraries in Kerala. Next the researcher tried to find out the the components which have significant impact on Change management.

4.7 Ranking of Components of Change Management

Next the investigator tries to find out the factors and components that have the greatest impact on change management. For the purpose a simple linear

regression analysis has been executed. The analysis was done between each component of change management. They are Change need identification, Strategy formulation, Planning, Resistance management, Communication, Implementation, Evaluation and Change Sustenance along with Internal and External factors to change, Leadership and Change obstacles. Analysis was done based on the greatest R^2 value. R^2 measures the amount of influence an independent variable has over a dependent variable (Pattabhiraman, 2020). Normally the value ranges between 0 and 1. R^2 value multiplied by 100 gives the percentage of variability. (Sivathaasan,2013). The scale used in this case is 0.000 to 0.200 is poor, 0.201 to 0.400 is low, 0.401 to 0.600 is moderate., 0.600 to 0.800 is high and Above 0.800 is very high. The obtained data is presented in table 82.

Table 82*Ranking of Components of Change Management*

Elements	R	R Square	Adjusted R Square	Std. Error of the Estimate	F value	P value	Impact
Planning	0.912 ^a	0.831	0.830	0.233	1298.252	0	Very High
Communication	0.857 ^a	0.735	0.734	0.292	732.673	0	High
Resistance management	0.857 ^a	0.734	0.733	0.293	728.347	0	High
Strategy formulation	0.842 ^a	0.709	0.707	0.307	641.904	0	High
Implementation	0.838 ^a	0.703	0.702	0.310	624.341	0	High
External Factors influencing Change	0.792 ^a	0.628	0.627	0.281	445.517	0	High
Leadership	0.761 ^a	0.579	0.578	0.368	363.294	0	Moderate
Change need Identification	0.748 ^a	0.559	0.558	0.377	334.988	0	Moderate
Internal Factors influencing Change	0.708 ^a	0.502	0.500	0.326	265.624	0	Moderate
Change Sustenance	0.661 ^a	0.436	0.434	0.426	204.475	0	Moderate
Organizational Obstacles	0.634 ^a	0.402	0.399	0.402	177.124	0	Moderate
Evaluation	0.623 ^a	0.389	0.386	0.444	167.813	0	Low
Personal Obstacles	.613 ^a	0.375	0.373	0.4111	158.659	0	Low

a. Predictors: (Constant), Change management

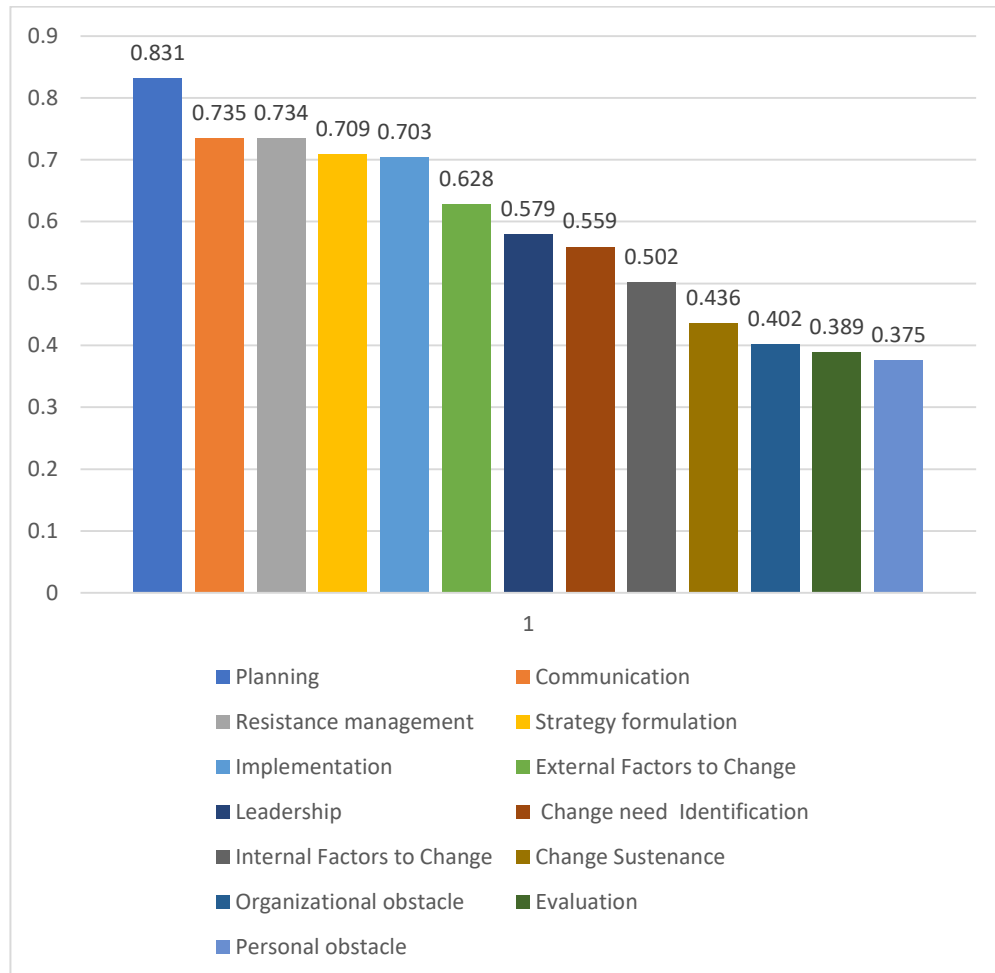
According to the regression result exhibited in table 82, it can be concluded that 'planning' has the highest influence on change management with 83 percent impact ($R^2=0.831$, $p=0$) when comparing to other elements. And p value is significant at one percent level. 'Communication' and 'resistance management' both have a high influence on change management with 73 percent impact each ($R^2=.735$ and $.734$ respectively, $p=0$) and p value is significant at one percent level. 'Implementation' and 'strategy formulation' also have a high impact on change management with 70% ($R^2=.703$ and $.709$ respectively, $p=.000$) which is significant at one percent level

External factors to change are exhibiting a high level of influence on change management with 62.8 percent ($R^2=.628$) impact. Internal factors to change showed a moderate level of impact on Change management with 50.2% influence which is significant at one percent level as the p value is 0.

Leadership is having a moderate level of influence on CM with 57 percent impact. Change need identification showed a moderate level of influence on CM with 55.9 percent ($R^2=.559$) impact. It is significant at one percent level. Organizational obstacles showed a moderate level of influence with 40 percent impact. Additionally Change sustenance also have showed a moderate level of impact on change management with 43.6 percent. ($R^2=.436$) influence. Here also the variation is significant at one percent level.

Among all these elements, 'Evaluation' has showed a lower rate of influence on change management with 38.9% impact ($R^2=.389$, $p=0$), and is significant at one percent level. Personal resistance also scored a lower value, here it is a positive indication while managing change because less personal resistance will yield better change results.

The Ranking of components of change management is well illustrated with the help of figure 10.

Figure 10*Ranking of Components of Change Management*

From the figure, it is clear that majority of the components have more than 70 percent of impact on change management which indicates a good consistency of the model with its components. Out of the components, planning is the most contributing and impacting component. Whereas evaluation is identified as the least influencing component of change management. Hence the evaluation phase in the management of change require special attention. Activities to robust evaluation needs to be in place.

4.8 Open Suggestions

The suggestions given by respondents in the space provided in the questionnaire revealed that network issues and power supply hinderances are the disturbing concerns they face and act as a disturbing factor in the path of change. University Librarians indicated that small changes (routine changes) and modifications in the way of working are always happening in university libraries in the state of Kerala. Some of them indicated that 'change in anticipation' is moderately happening. All of them agreed with the fact that 'unpredicted emergency changes' are comparatively less happened change in university libraries in the state of Kerala. In a similar way Adipudi (2018) observed that incremental changes which are the adjustment made to the changing environment are the mainly adopted change in the Indian textile and apparel industry. Whereas major realignments and radical shifts in the strategy and revolutionary changes are the least undergoing changes in the Indian apparel industry. Librarians suggested that there is a need of continuous HRD programmes both in-house and with the aid of external agency which will help in the management of change. They also opined that introduction of quality circle concept will help improve the change management. Some of them stressed the fact that co-operative planning and implementation only can reap intended result of the change endeavours.

4.9 Conclusion

The overall analysis showed that every step in the change management has been carried out in seven university libraries at a medium level. Majority of the changes happening in the libraries are associated with technological advancement in the concerned areas. Downsizing of staff is the less seen change in the internal sphere of the library. In sufficient fund is a common threat in all university libraries which backtrack the progress and development of the entire library system. The strong reason for resistance from the staff side is the fear of unknown change. The ambiguity in the minds of employees regarding -what to be done to change-could be drawn away by giving them adequate knowledge relating to every aspect of change. The study revealed that even though the need for change is clearly communicated,

the level of communication is not up to staff expectations. It needs to be improved. Even though moderate level of change management practices is observed, evaluation, change sustenance and resistance management are the weaker areas which need to be improved while managing change in the university libraries in Kerala. The components also have an adequate impact on change management. Among the components planning is proved as the most influencing and contributing component of CM. Whereas evaluation is identified as the least contributing component in the management of change in the university libraries in Kerala. Evaluation phase also proved as the weakest area of CM which require immediate improvement. The study also identifies the reason behind the weakness of each component of CM and able to propose remedial actions. University librarians indicated that even though authority support change, there is a difficulty in convincing the authority. Librarians recalled that the success of a change initiative is chiefly assessed through user feedback.

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Chapter V

FINDINGS, SUGGESTIONS AND CONCLUSION

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5.1 Introduction

The study has been carried out to identify the change management practices followed in university libraries in Kerala. Eight research questions have guided the study such as change need identification, strategy formulation, planning, communication, resistance management, implementation, evaluation and change sustenance. Along with this, change influencing factors such as leadership, personal and organizational hurdles, internal and external factors to change are observed in libraries, most changing segments in the library also have been scrutinized.

The result obtained after the analysis of data would be helpful in determining the change management techniques and in offering a framework for managing changes in libraries.

5.2 Major Findings:

The major findings observed from analysis and interpretations are listed in various categories below:

5.2.1 Change Need Identification

1. There is no gender-wise significant difference in the change need identification of library professionals in the university libraries in Kerala.
2. There is a university-wise significant difference in the 'change need identification' of library professionals in the university libraries in Kerala.
3. The result of the analysis as well as the response of the Chief librarians also claim that the professionals in the university libraries in Kerala can identify the 'need to change' at a moderate level.
4. A designation-wise significant difference exists in the 'change need identification' of employees in the university libraries in Kerala.
5. Employees in the lower designations are more skilful in identifying 'change need'.

6. University librarians remarked that library considers both internal and external factors in order to introduce a new change in libraries.

5.2.2 Strategy Formulation

7. There is no gender-wise significant difference in the strategy formulation of university libraries in Kerala.
8. There exists a university wise significant difference in strategy formulation in university libraries in Kerala.
9. In the case of the CU library system, strategy formulation lies at a higher level.
10. In the case of the KAU library system, strategy formulation lies at a lower level.
11. There is no designation-wise or experience-wise significant difference is observed in the strategy formulation of university libraries in Kerala.
12. In the university libraries in Kerala, strategies are formulated for making change lies at a moderate level

5.2.3 Planning

13. There is no gender-wise significant difference regarding planning procedures carried out in the university libraries in Kerala.
14. The planning process before change is carried out at a moderate level in the university libraries in Kerala.
15. There exists a university wise significant difference in the planning process for change carried out in university libraries in Kerala.
16. University Librarians indicated that the 'change readiness' of employees were assessed before making a change.

17. There is no experience-wise or designation-wise significant difference is observed in the planning process carried out for change in university libraries in Kerala.
18. Kannur and Calicut university libraries are well adept in planning change when compared to other university libraries.
19. In the KAU library system, planning is carried out at a lower level when compared to other university libraries.

5.2.4. Communication

20. There is no gender wise significant difference is observed in the communication process carried out during the change
21. There exists a university -wise significant difference in the communication process during change.
22. The change-related matters are communicated at a higher level in KU and CU library systems.
23. The communication process is taking place at a lower level in the KAU library system
24. There exists an experience-wise significant difference in the communication process for change in the university libraries in Kerala.
25. The communication process takes place at a moderate level in the university libraries in Kerala.
26. There is no designation-wise significant difference in the communication for change in the university libraries in Kerala.
27. Even though the need for change is communicated, the level of information communicated to employees needs to be increased to reach the expectations of the workforce.

28. In university libraries, change communication mainly takes place face to face through meetings.
29. Video conferencing, SMS, e-mail and WhatsApp are the less utilized means of change communication.

5.2.5. Resistance Management

30. There is no gender-wise significant difference in the resistance management practices followed in the university libraries in Kerala.
31. Resistance management practices are followed at a moderate level in the university libraries in Kerala
32. There exists a university wise significant difference in the resistance management procedures followed in university libraries.
33. There is no significant difference in the resistance management practices followed in university libraries concerning different years of experience or designation.
34. Resistance management practices are followed at a moderate level in CU, KU, KNRU and CUSAT libraries.
35. Resistance management practices are followed at a lower level in KAU, MGU. and SSUS libraries.

5.2.6. Change Implementation

36. There is no gender-wise significant difference in the change implementation practices followed in the university libraries in Kerala.
37. There exists a university wise significant difference in the change implementation practices of university libraries in Kerala.
38. Change implementation is carried out in university libraries at a moderate level.

39. There is no designation-wise or experience-wise significant difference in the change implementation practices in the university libraries in Kerala.
40. Change implementation is carried out at a lower level in the MGU library system.

5.2.7. Change Evaluation

41. The evaluation procedures take place at a moderate level in KU, CUSAT, CU and KNRU university libraries.
42. In the case of MGU, SSUS and KAU library system, the evaluation procedure is being done at a lower level.
43. The evaluation practices followed in libraries differ significantly based on their respective universities.
44. There is no significant difference in the opinion of employees regarding the change evaluation procedures taking place in their libraries with different years of experience, genders or different designations.

5.2.8. Change Sustenance

45. Even though female professionals have scored a comparatively better mean value, on the change sustenance activities carried out in their libraries, the difference is not statistically significant.
46. There is a university-wise significant difference observed in the change sustenance activities in the university libraries in Kerala.
47. Change sustenance activities are carried out at a moderate level in the university libraries in Kerala.
48. There is no experience-wise significant difference in the opinion of employees regarding change sustenance activities carried out in their libraries.

49. There is a designation-wise significant difference in the opinion of employees regarding change sustenance activities carried out in their libraries.

5.3 Factors Influencing the Change Process

5.3.1 Internal and External Factors Influencing Change

50. 'Increased demand for better and faster access to information' is the highly influencing external factor which forces libraries to make changes.
51. 'Increased emphasis on self-reliance' is the least influencing external factor which forces libraries to change.
52. 'User requirements and 'technology' segments are the most changing internal factors of university libraries in Kerala.
53. 'Downsizing of staff' is the least happening change in the internal sphere of university libraries in Kerala.
54. The digital section is a rapidly changing section than other sections in university libraries in Kerala.

5.3.2 Organizational Obstacles

55. Female library professionals scored a higher mean value in organizational obstacles when compared to male library professionals but the difference is not statistically significant
56. The presence of organizational obstacles lies at a moderate level in the university libraries in Kerala, which retrogress the change process.
57. Even though a difference in the mean values of organizational obstacles with different years of experience is observed, the difference is not statistically significant.
58. KNRU libraries experience a comparatively higher level of organizational obstacles to change

59. 'Insufficient funds' is the most critical organizational resisting factor which the workforce faces as a hindrance to change.
60. 'Lack of infrastructure' is the second most critical organizational obstacle to change.
61. 'Attitude of staff' is the least bothered organizational obstacle to change which indicates that the employees have a positive attitude towards change. As well as politics in the institution is also considered as a less considered organizational hurdle.
62. There is a university-wise significant difference in the organizational obstacle related to change.

5.3.3 Personal Obstacles

63. A moderate level of personal obstacles which backtrack change processes exist in the university libraries in Kerala.
64. There exists a university-wise significant difference in the personal obstacles of employees.
65. MGU library professionals are facing more personal obstacles when compared to other universities.
66. KAU library professionals found personal obstacles to change at a lower level.
67. Female library professionals experience more personal obstacles when compared to male library professionals but the difference is not statistically significant
68. Professionals having fewer years of experience are facing more personal obstacles.
69. There exists an experience-wise and designation-wise significant difference in the personal obstacles of employees.

70. 'Fear of unknown change' is the most serious personal obstacle that employees face while going through the change process.
71. Fear of losing recognition is the least considered personal obstacle which resists change.

5.3.4. Leadership

72. There is a university-wise significant difference is observed in the leadership during change.
73. CU libraries pointed out a positively higher level of leadership observed during change in their libraries.
74. KAU libraries found out that their leadership during change lies at a lower level when compared to other university libraries.
75. There is no significant difference found in the leadership during change with different years of experience.
76. Even though a difference is observed in the mean values of leadership with different designations, the difference is not statistically significant.
77. Leadership during change in the university libraries in Kerala lies at a moderate level

5.4 Change Management

78. There exists a university wise significant difference in the management of change in the university libraries in Kerala.
79. The change management techniques are practised at a moderate level in university libraries in Kerala.
80. Among the seven universities CU library system lies at a comparatively higher level and KAU library system lies at a comparatively lower level in the management of change.

5.5 Areas Need Improvement in the Management of Change

81. Evaluation and change sustenance are the identified weaker areas of change management in the KU library system.
82. 'Acceptance of negative feedback' and 'Employees could be made accountable for not making a change' are the areas where the KU library system falls short in the evaluation phase.
83. 'Positive reinforcement from authority' is the area that requires improvement in the change sustenance phase in the KU library system.
84. Evaluation, resistance management and implementation are the weaker areas of change management in the MGU library system.
85. 'Corrective actions on underperformed employees' and 'Making reviews and rectifications as per feedback' are the two elements which are less reckoned with the evaluation phase in the MGU library system.
86. 'Proper training and guidance to handle the change' as well as 'addressing the apprehensions regarding change more tangibly' are the two less considered elements in the resistance management efforts in MGU library system.
87. 'During the implementation of the plan, the difficulties were addressed properly' is the statement that employees pointed out as a least noticed factor in the change implementation process in the MGU library system.
88. Evaluation and resistance management are the two weaker areas in the management of change in SSUS library system.
89. 'Conducting periodic evaluation' and 'giving more priority to user feedback' are the two evaluation phase components that are less taken into account in SSUS library system.
90. 'Apprehensions regarding change being addressed in a tangible way' is the least considered factor in the resistance management in SSUS library system.

91. Evaluation and resistance management are the two weaker areas of change management in the CUSAT libraries.
92. 'The employee could be made accountable for not making a change' is the least considered factor in the evaluation phase in CUSAT libraries.
93. 'Apprehensions regarding change being addressed in a tangible way' is the aspect which is given the least consideration in CUSAT libraries' resistance management activities.
94. Evaluation and resistance management are the two areas which require immediate redesigning and streamlining in the management of change in the KAU library system.
95. 'Conducting step-by-step periodic evaluation' is the least scored factor in the evaluation phase in the KAU library system.
96. 'Good works and initiatives welcomed in the library' and 'Employees allowed to present their views in the library meetings' are the less considered factors in the resistance management phase in the KAU library system.
97. Evaluation and change sustenance are the areas which need betterment in the CU library system.
98. 'Authorities accepting negative feedback from employees' is the least scored statement in the evaluation phase in CU library system.
99. In the change sustenance phase of CU library system, 'making change as the integrated way of working' and 'Positive reinforcement' receive lower scores.
100. Resistance management and evaluation are the components which need immediate improvement in the KNRU library system.
101. 'Providing proper training and guidance' is the least considered factor in the resistance management activities in the KNRU library system.

102. 'Supervisors accept negative feedback from employees' is the least scored factor in the evaluation phase in the KNRU library system.

5.6 Ranking of Components of Change Management

103. In the overall university scenario, the components of planning, communication, strategy formulation, resistance management and implementation are the more influencing and contributing factors towards overall change management with more than 70 per cent impact.
104. The result of the regression analysis indicates that among the components of Change Management, planning is the most influencing and contributing element in the management of change with 83 per cent of impact. This is a good implication because it indicates that planning is carried out in university libraries of Kerala in a better way.
105. Out of the components of change management, evaluation is the last ranked or least influencing component. Hence it is the weakest part in the management of change in the university libraries in Kerala. To make the situation better, libraries can introduce and schedule regular feedback sessions including participation from every side which ensures inputs from superiors, subordinates and peers at the same time.

5.7 Tenability of Hypotheses

1. There is a university wise significant difference in the change management practices followed in the university libraries in Kerala.

The result of the analysis exhibited in Table 6 shows that there is a university-wise significant difference in the change need identification of the workforce. As per Table 12, there is a university-wise significant difference in the strategy formulation. Again, in Table 17, university wise significant difference is seen in the planning of change. Similarly, Table 22(Communication regarding change), Table 28(Resistance management), Table 33(Implementation of change), Table 38 (Evaluation of change) and Table 43(Change sustenance) also have shown a university-wise significant

difference. All these components of change management have shown a university-wise significant difference. This has been confirmed in Table 71 and finding no. 78.

Thus, the hypothesis one is fully substantiated.

2. There is a gender-wise significant difference in the change management practices followed in the university libraries in Kerala.

The result of the analysis exhibited in Table 5(Change need identification), Table 11 (Strategy formulation), Table 16(Planning of change), Table 21(Communication), Table 27 (Resistance management), Table 32(Change implementation), Table 37 (Change evaluation) and Table 42(Change sustenance) shows that there is no gender wise significant difference exist. Along with this table 70 also confirms that there is no gender-wise significant difference exist in the change management practices followed in the university libraries in Kerala.

Thus, the hypothesis two is rejected.

- 3 Both internal and external factors influence change and have a significant impact on change management.

The result of the analysis in Table 82 shows that the external factors to change are exhibiting a high level of influence on change management with a 62.8 per cent impact. Internal factors to change also showed a moderate level of influence on Change management with a 50.2 per cent impact. Both are significant at a one per cent level. This proves that both internal and external factors to change have a significant impact on change management.

Hence the hypothesis three is accepted.

4. There is a university-wise significant difference in the change obstacles which resist change in the university libraries in Kerala.

According to Table 52, there exists a university wise significant difference in the organizational hurdles in the university libraries in Kerala. Again Table 61 claims a university-wise significant difference in the personal obstacles in the university

libraries in Kerala. This indicates that there is a university-wise significant difference in the change obstacles which resist change in the university libraries in Kerala.

Hence the hypothesis four is accepted.

5. The communication for change across different libraries in the universities in Kerala is significantly different

Table 22 indicates the university wise analysis of change communication taking place in the university libraries in Kerala. Here the p value obtained is zero which means $p < 0.01$. Which shows a university wise significant difference at one percent level. Thus table no. 22 and finding no. 21 reveal that there is a university-wise significant difference in communication during change.

Hence the hypothesis five is accepted.

- 6 There is no significant difference in the leadership observed across university libraries in Kerala during the change.

The university-wise analysis of leadership presented in Table 64 shows that the p-value obtained is zero. This indicates that there exists a university-wise significant difference in the leadership during change at one per cent level. The finding no. 72 also claims the same fact.

Hence this null hypothesis has been rejected.

5.8 SUGGESTIONS

Based on the analysis and findings the researcher has put forward the following suggestions and recommendations which may help in improving the management of changes in the library environment.

1. The ultimate success of change management is decided by the end user. The study revealed that user influence and requirements are the most critical factors that need to be considered while designing a change for the university library. Therefore, all the facilities and services shall be tuned and sharpened to user contentment.

2. University librarians of different universities in Kerala responded that 'small changes' are the frequently observed changes in the university libraries. These changes, as they indicated are mainly the slight modifications to the normal way of working. According to them, 'Unpredictable, emergency change' is comparatively less happened change in libraries. Whereas 'change in anticipation' is practiced at a moderate level. Even though expert opinion and staff suggestions are important, to anticipate change well in advance, more focus should be given to users' requirements. But University librarians pointed out that only a moderate level of user studies are carried out in university libraries in Kerala. Hence a user need assessment on a regular basis has to be in place. Because the pattern of user requirements would help in designing the forthcoming changes for libraries. With a proper user requirement assessment, all the needs of users can be identified and the library could consider it on a priority basis. A thoughtful and serious involvement from management and employees is also required in developing user requirements to "change need"
3. The study observed that the employees in the university libraries can identify the need to change at a moderate level. To elevate this level, apart from user studies, opportunities must be given to library professionals to learn best practices and initiatives from outstanding libraries. Because these opportunities would be an open window for the library professional to be with the changes happening globally. Encouragement from the authorities is essential to review the latest and current literature in the library and information science field as it also helps in identifying the forthcoming change. Libraries have to ensure maximum participation in the initiatives and to present papers/thesis in national and international conferences/ workshops etc. This will help in both personal and professional growth as well as understanding state-of-art changes in the field of library and information science and promote the futuristic planning and implementation of changes.

4. University librarians claim that clear achievable goals were set and the latest and leading technology for making change is also in place. The analysis of employee response regarding strategy formulation revealed that strategy formulation is carried out at a moderate level in the university libraries in Kerala. University librarians viewed that even though the authority supports change, it is still difficult to convince the authority. The library should ensure more staff participation and should have proper and reachable projects with transparent discussions with the authorities to convince them. A serious and thorough study regarding the strengths, weaknesses opportunities and threats present in the library environment must be done in libraries to improve the strategy formulation phase.
5. Planning is conducted at a moderate level in university libraries. From the responses of university librarians, it is clear that employee readiness to change needs to be improved. Before introducing a change, the change readiness of employees has to be analysed properly. It helps to understand whether the professionals are ready to deal with the change. Face-to-face interactions with employees, giving them response forms to mark their vision, attitude, approach etc., about the particular change will help in enhancing planning. Also, proper observation of the employee would give insights about their readiness to change. To properly carry out the planning phase, the library should conduct a staff skill study (survey). For that, expertise from external agencies also can be sought if needed, which will help in assigning roles to professionals as per their competency. Specialized coaching also can be designed for underskilled professionals
6. Interview with Chief librarians indicated that the employees understand the message communicated to them in a moderate way. The analysis of employees' responses to communication proves that change communication takes place at a medium level. Even though the need for change is communicated the level of communication conversed to the workforce needs to be improved. There is no such thing as an over communication. Whenever

and wherever it is necessary communication must take place in libraries. The library should encourage interactive two-way communication. This will eliminate ambiguity regarding the new roles and responsibilities from the minds of professionals as well as the authority would get clarity in the understanding of the worker's attitude, approach and skillset. Conveyance of messages face to face through meetings is the chief mode of communication in libraries. Whereas communication through video conferencing, SMS, WhatsApp and e-mails are the less utilized modes of communication in university libraries in Kerala. In the new era where chances of pandemics, lockdowns and isolations are common, communication through online platforms like WhatsApp, e-mails and remote access options should be encouraged.

7. Insufficient fund is the most critical organizational obstacle which the study pointed out. There is a limitation for the library and library authority to fix this matter as it is a threat which is beyond the control of the library system. Still, there are possibilities for libraries to convince authorities with appropriate projects and proposals. When the libraries are able to convince the authorities regarding the urgency of change, financial constraints could be beaten and thereby able to win support for change.
8. The personal obstacles that the study pointed out are the fear of unknown change, lack of skill, and training. Employees with fewer years of experience find more personal obstacles than others. Professionals with fewer years of experience in the institutions probably would be the freshers in the institution. Hence, they may not have a proper understanding of the dynamics of the very library. The ambiguity and fear in the minds of employees regarding 'change' can be lessened by proper communication, training and guidance. Proper acquaintance from senior members will help freshers to cope up with the change.
9. Authority giving more acceptance to the negative feedback given by the employee side would make the evaluation process more meaningful in Kerala

University libraries. Making employees more responsible for the tasks assigned to them will also enhance the evaluation process in the KU library system.

10. Providing ample positive reinforcement activities will help in sustaining the achieved changes in the KU library system.
11. Effective redressal activities to remove the fear of change from the minds of employees will strengthen the resistance management activities and thus minimise resistance in the CUSAT library system.
12. Creating a positive work environment where the workforce can feel a sense of belongingness is essential in CUSAT libraries to refine resistance management activities. This will keep down the feeling of employees that the changes are being enforced on them.
13. Making employees more responsible for the changes assigned to them by imposing remedial measures would indeed help in making the evaluation process better in CUSAT libraries.
14. Making reviews and rectifications as per feedback as well as corrective actions on underperformed employees will help in improving the evaluation process in MGU libraries.
15. Proper training and guidance to handle the change as well as addressing the apprehensions regarding change in a more tangible way are the two methods through which the resistance management activities shall be refined in MGU libraries.
16. A more effective approach to deal with strain and problems during implementation needs to be in place in MGU libraries. At the same time, the consistency in the coordination and cooperation of various internal units also needs to be improved so that the implementation phase can be done more effectively in MGU libraries.

17. Giving more priority to user feedback and conducting periodic evaluations will fine-tune the evaluation process in SSUS libraries.
18. More functional training and effective guidance regarding change as well as addressing fear of change in a better way will enhance resistance management activities in SSUS libraries.
19. Giving more acceptance to negative feedback will help improve the evaluation process in the CU libraries. Taking corrective actions more seriously on underperformed employees and assessing the performance of employees in a more meaningful way also shall help to enhance the evaluation process in the CU library system.
20. Training and guidance to handle the change should be more effectively designed to minimise resistance from employees in the KNRU libraries.
21. Assessing employee performance in a more meaningful way will improve the evaluation phase in the KNRU libraries.
22. Encouraging employees to express their views openly and boost them with recognition for good initiatives will improve the resistance management activities in the KAU libraries.
23. As per analysis, the resistance management activities of libraries need improvement. University librarians agreed that resistance often disturbs change and they are aware of the presence of implicit resisters in their respective library systems. Resisters are the actual weakness of the library. Efforts from, within the library can only resolve the problem. Vigilant and cautious involvement on the part of the library is important in dealing with resisters. Enhanced training and mentoring at regular intervals are decisive.
24. University librarians remarked that they have experienced a moderate level of difficulty in addressing the apprehensions of employees which arise during change. Maintaining an approachable and flexible environment in the library surely will help reduce the fear of employees regarding change. In such an

environment, the professionals feel free to express their concerns and thereby able to receive adequate guidance to carry out change. The library should involve professionals also in the decision-making process as much as possible. This feeling of involvement itself will help in reducing change resistance, especially implicit resistance. Librarians moderately agreed with the fact that rewards and recognition reduce change resistance. Rewards do not always need to be in monetary terms. An appreciation for good work or recognition for good initiative probably boosts the self-esteem of the staff. This could lead to more acceptance and less resistance to change.

25. The study pointed out that a moderate level of leadership is present in the university libraries in Kerala. The performance and attitude of library leaders are reflected in their decisions and their willingness to take risks. Providing motivation and support to employees will increase the trust in the leadership.

26 Systematic and periodic post-change evaluation is pivotal. After the implementation of change, a vigilant and serious assessment of 'whether the change has attained the intended goal' has to be examined and confirmed. The main weaker area the study pointed out is the evaluation phase. From the item-wise analysis of libraries, it is seen that giving priority to corrective actions on underperformed employees and considering negative feedback are the two areas which need attention to enhance the evaluation process. Along with that providing importance to change, proper performance assessment, and conducting step-by-step periodic evaluation methods also boost the evaluation process in different university libraries in Kerala.

Library authorities should take corrective actions against underperformed staff. Other than being commanding and controlling, creating a flexible environment where opportunities for participation and collaboration are possible is more helpful in maintaining the new normal. Along with continuous evaluation, accountability for making or even not making the change also needs to be in place.

27. To handle the changed library environment, obviously a changed skill set is required. To maintain a quality workforce, opportunities for the development

of skills along with required education for the profession are needed. An updation in curricula would equip the upcoming professionals to handle the changed situation.

28. Motivation plays an important role in the management of change. A more supportive and positive recognition from higher authorities for outstanding performance and initiatives needs to be in place. This probably will prompt other employees to perform better.
29. Authorities should make necessary arrangements to ensure basic infrastructure like uninterrupted power supply and network facilities in the library. This point is indicated by the majority of library professionals as their open suggestion. This is a very crucial issue faced in the majority of libraries and it is a serious hindrance to the normal performance of libraries.
30. An extensive user orientation in the form of training can be given to familiarize them with new services/facilities introduced in the library. Along with this establishing an effective customer service point will ensure proper information regarding new changes introduced in the library.
31. The study proved that gender has no significant difference in the management of change for university libraries in Kerala. Hence considering gender while managing change in university libraries in Kerala is not necessary.
32. Based on the procedures and the factors discussed in this study, libraries can introduce and implement a change management policy which facilitates smooth and successful transitions and promote innovations within the library.

5.9 CONCLUSION

The advancement in information communication technology has brought about tremendous changes in the way information is stored accessed and retrieved. Libraries' facilities and services are likewise undergoing such a significant transformation. To cope with the changing scenario, libraries need to revamp and reorient themselves regularly. For this purpose, libraries must be able to manage the

frequent and regularly happening changes in the environment. Hence an assessment of change management of libraries has been done here to find out the ability of university libraries to manage change. A quantitative methodology was used for the study. The study was done on the library professionals working in the seven university libraries in Kerala. Leading change management models were analysed and made base for constructing questionnaire for data collection. The questionnaire tool was validated using Cronbach's alpha.

The researcher tried to explore the level of application of change management techniques in the university libraries in Kerala and hence an attempt was made to identify the practices of university libraries to manage change in the operational environment. The procedures of change management such as change need identification, strategy formulation, planning, communication, resistance management, implementation, Evaluation and change sustenance have been mainly analysed.

While analysing the 'change need identification', it is found that the university libraries can identify the need to change only at a moderate level. The Chief librarians also confirmed the fact that the ability of the workforce in the university libraries lies at a moderate level.

When analysing the strategy formulation, it is found that in CU libraries the strategy formulation procedures were carried out at a higher level. KAU showed a lower level in the strategy formulation procedures followed in their libraries. In all other libraries, strategy formulation procedures were carried out at a moderate level.

Regarding 'planning' for change, it is observed that in KNRU and CU libraries planning functions are carried out at a high rate. Wherein KAU, planning procedures were followed at a lower level. A moderate level of planning procedures was followed in other university libraries.

In resistance management procedures followed, MGU, KAU and SSUS lie at a lower level. In all other universities, a moderate level of resistance management practices is followed. Chief librarians have pointed out that they have experienced a

moderate level of difficulty in addressing the apprehensions of the employees which arise during change. This certainly would cause resistance. A perfect two-way communication where the gap between the need for authority and the difficulty and the challenges of meeting the needs from the workforce is balanced,- is crucial.

While implementing change, MGU libraries showed a lower level of change implementation capability. Whereas all other university libraries revealed that they are able to implement change at a moderate level.

In the post-change evaluation phase, MGU, KAU and SSUS lie at a lower level in carrying out the evaluation process properly. A moderate level of post-change evaluation process was in place in the other universities

The communication process carried for change indicated that in KAU libraries, a lower level of change communication was observed. In KNRU and CU libraries, a higher level of communication process was noticed. In all university libraries, it is found that the change in sustenance activities is followed at a moderate level.

In change communication, it is found that even though the whereabouts of change were being communicated, the workforce was not satisfied with the level of information communicated to them. Communication through meetings is the chief mode of communication in libraries. General meetings have the freedom that it is easier both for the authority and for the workforce to exchange ideas and give instructions face-to-face regarding change. Still, some employees may have doubts, concerns or ambiguity regarding change and everybody may not be able to raise questions and doubts in common meetings. Such cases negatively impact the success of change. Foreseeing such instances, the authority must encourage professionals to engage in informal communication. Communication through E-mail, WhatsApp and video conferencing are comparatively less utilized. Libraries should promote the use of online platforms for information communication. It is a convenient mode of communication as it is more cost-effective and quicker than conducting physical meetings. Hence it allows speedy decision making. People can communicate on these

platforms regardless of their physical location is another advantage of libraries having centres scattered across the state.

To have a better understanding of change need, a thorough knowledge of both internal and external environments is crucial. The study revealed that the external environmental change has consequently made changes in the internal sphere as well. As a result of the technology revolution, there is an elevated demand for better and faster access to information globally and has been identified as the most influencing external factor by the study. Similarly, user requirement is the most influencing internal factor of the library. The study emphasises that 'user feedback' must be the first priority means to initiate change in libraries. Both internal and external factors have a significant impact on change management.

The study reveals that a moderate level of leadership is present in the university libraries during change. The leadership can be enhanced by accepting regular feedback from professionals working in libraries. Also, a flexible and unbiased attitude of a leader will raise the image of the leader. Winning the trust of employees through integrity and ethics would help to improve leadership from a moderate level to a higher level.

Insufficient funds are the most critical organizational hindrance which libraries face while making change. Establishing and properly maintaining libraries have to be one of the prime concerns of the authority (parent body). For this purpose, special consideration must be given while allocating funds. Politics in the institution is one of the less influencing organizational obstacles which disturbs change. The attitude of staff is the least influencing organizational obstacle which indicates that a positive attitude from the staff side is seen in libraries which is beneficial for carrying out change.

Fear of unknown change is the prime personal resisting factor. Lack of skill, Lack of education and training comes in the next level of resisting causes. It must be noted that financial loss or losing recognition are not the concern of the workforce for accepting a change. It is suggested that proper mentoring and training must be offered to the workforce which makes them equipped to handle the change.

The study also revealed that gender is not a factor to be considered while managing change in university libraries since gender has shown no significant difference in any of the components of change management.

The ranking of components of change management based on regression analysis proved that planning has the highest influence on change management 83% impact. The majority of components showed more than 70% of impact. The component evaluation has shown the least impact on change management. Hence the evaluation criteria should be strengthened to properly manage change.

. The change management practices followed in the university libraries in Kerala has been scrutinized with the help of different statistical analysis. The study underscored the need for a more cautious and attentive approach for managing change. Study identified weaker areas which need improvement in change management in each university library system and suggested redressal mechanism to improve the de-emphasized areas of each university library system based on the university wise item analysis. This study concludes with the fifth law of Library science - "Library is a growing organism." As Dr. S.R. Ranganathan visioned, libraries are growing with change and are awaiting more changes and challenges through ages. And the effective handling of transition is expected to yield the optimal change output.

5.10 Scope for Further Research

The present study focused on the Change Management of the university libraries in Kerala. There is a vast scope for the study of Change Management about other variables which is of importance to the LIS field. The following topics provide light on potential areas for future investigation.

1. Change management and Organizational effectiveness in the university libraries
2. Influence of Change management on employee performance in the university libraries.

3. Impact of Change management on user satisfaction -Case study
4. Study on the impact of Organizational culture on Change management
5. Change management of university libraries in India

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APPENDICES

APPENDIX I
STATEMENT WISE ANALYSIS
- CHANGE MANAGEMENT (MEAN VALUES)

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
Change need identification								
1	I think libraries cannot survive without change	4.1125	4.0426	4.1750	4.2143	4.5645	4.1429	4.1111
2	I am aware of changes in the internal environment of library system	3.9375	3.9574	3.7750	4.000	4.1935	4.0714	3.8889
3	I am aware of the current position of library in relation to leading library	3.8375	3.9574	3.6000	4.0714	4.0968	4.2857	3.5556
4	My library anticipates change well in advance	3.6000	3.5106	3.3750	3.5000	3.7903	3.2857	3.3333
5.	My library motivate me to accept new ways of working	3.7000	3.6383	3.2750	3.0714	4.0000	3.6429	2.4444
Strategy Formulation								
6.	Approaches like SWOT, CQA, PEST etc. were considered while formulating strategy for change	3.1500	2.9787	3.1000	2.7857	3.3226	3.0714	2.7778
7.	Staff Participation /suggestion ensured while making strategy	3.7375	3.8298	3.0500	3.3571	4.1935	3.7857	2.3333
8	Whenever formulating strategy for change, a defined and achievable goal was foreseen	3.6625	3.7447	3.2250	3.0000	4.1452	3.9286	2.8889
9	The set goals coincide with the aims and objectives of library	3.7500	4.000	3.5250	3.4286	4.1290	3.7857	3.0000
10	The long-term objectives of the library were always divided into achievable functional goals	3.4875	3.8085	3.5250	3.1429	4.1613	3.7143	3.2222
11	Library always successful in convincing university authorities about the need to change	3.5500	3.6809	3.3000	3.2143	4.0806	3.3571	3.1111

Appendices

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
12	University authority always support change	3.8125	3.9574	3.4250	3.2857	3.9032	3.6429	3.2222
13	Past experiences were given due consideration while formulating strategies for change	3.6125	3.7021	3.2500	3.3571	4.2258	4.0714	3.2222
14	The prevailing organizational culture was taken into account before finalizing the strategy for change	3.3000	3.5532	2.8750	3.3571	4.0806	3.8571	2.7778
Planning								
15	Planning was always given priority while changes were made in the library	4.1625	3.8298	3.3750	3.6429	4.5323	4.5714	2.8889
16	Employees readiness to change were always analyzed when a change is introduced in the library	3.9000	3.8511	3.4000	3.3571	4.1290	4.2857	2.8889
17	While planning a change in the library, the role of each staff was defined	3.9250	3.8085	3.6250	3.5714	4.0968	4.2857	3.0000
18	Whenever library is making a change, the end user preferences were always kept in mind	3.9625	4.1277	3.5250	3.6429	4.3710	4.6429	3.3333
19	A study on staff skills to carry out their roles were done	3.6500	3.7021	2.9750	3.2143	3.9839	3.9286	3.4444
20	A team for change management is formed to bring in desired changes in library	3.6500	3.5745	2.8250	2.7143	4.0806	3.9286	2.4444
21	The implementation of changes was planned with latest and leading practices	3.7375	3.8085	3.3000	3.1429	4.2581	4.2143	2.8889
22	A blue print of actions to be taken is always made before	3.6250	3.7021	3.2250	3.0714	4.0484	4.2857	3.1111
23	Enough time is allotted for planning	3.7625	3.6596	3.1250	3.6429	3.9355	4.2143	2.0000
24	A time frame for completion at every stage of change has been set	3.5500	3.5532	3.0500	3.1429	4.0323	4.3571	3.2222

Appendices

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
25	Library ensured adequate organizational structure to carry out change	3.7500	3.9787	3.2750	3.5714	4.0806	4.0000	2.4444
Communication								
26	The need for change is clearly communicated	4.000	4.0426	3.5500	3.2143	4.2419	4.4286	3.5556
27	The employees were informed about their roles in and after change	3.8875	4.0213	3.3250	3.3571	4.1774	4.5714	2.5556
28	The library authority listens to staff concerns regarding change	3.7500	3.7872	3.5250	3.2143	4.2742	6.7143	3.4444
29	I am getting communication of change on time	3.6625	3.8085	3.2750	3.0714	4.0645	4.1429	2.7778
30	Staff doubts on change were timely clarified	3.8250	3.8511	3.4500	3.2143	4.1129	4.2857	2.5556
31	I am satisfied with the level of information communicated to me regarding change	3.6500	3.5957	3.4250	3.0000	4.0161	4.0714	2.7778
32	The content of the message was relevant to the proposed change	3.6250	3.9362	3.6750	3.0714	4.0968	4.2143	3.1111
33	Library makes sure that messages are reaching to employees and being understood	3.6625	3.7447	3.5000	3.2143	4.0161	4.0714	2.8889
Statements-Resistance management								
34	The changes were always enforced on staff	3.8875	3.7234	3.8250	3.1429	3.3226	3.5000	3.2222
35	The benefits of changes were communicated appropriately	3.5375	3.1489	3.0000	2.8571	3.5968	3.4286	2.4444
36	Proper training and guidance were provided to handle the change.	3.5000	3.2340	2.6000	2.7857	3.6452	3.1429	2.3333
37	Apprehensions regarding change being addressed in a tangible way	3.2750	3.1064	2.7000	2.5000	3.3871	3.4286	2.8889

Appendices

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
38	Employees were allowed to present their views in library meetings	3.5375	3.2979	2.9500	3.6429	3.8387	3.7857	2.2222
39	Good work and initiatives always welcomed & appreciated in the library	3.5500	3.4043	2.9000	3.0714	3.8387	3.8571	2.0000
Implementation								
40	All activities involved in the change were carried out according to the work plan	3.7750	3.4043	3.3000	3.1429	3.8548	3.5714	3.5556
41	Choices were always given to matters that require urgency while making change	3.6875	3.4894	3.4750	2.7143	3.8548	3.8571	3.0000
42	The library ensured proper procedures and inevitable tools for implementation of change	3.6875	3.3617	2.7500	3.0000	3.6613	3.5000	3.0000
43	The plans relates to change were implemented within a reasonable time	3.5000	3.3191	2.9750	2.5000	3.5806	3.6429	3.5556
44	During the implementation of plan, the difficulties were addressed properly	3.6750	3.3830	2.5500	3.3571	3.6774	3.5714	3.5556
45	The resources allocated for implementation were sufficient	3.4125	3.0426	2.7750	2.7143	3.3871	2.8571	2.8889
46	The plans were implemented step by step	3.5750	3.3404	3.0500	2.7143	3.8387	3.6429	3.2222
47	The co-ordination and co-operation among various internal units were done in a consistent way	3.5375	3.3830	2.6500	2.7857	3.7419	3.4286	2.4444
48	Library staff support implementation	3.7375	3.5532	3.2250	2.7857	3.9839	3.8571	3.2222
49	Library always have a hassle-free implementation	3.3125	3.1489	2.7500	2.8571	3.5645	3.5000	3.0000

Appendices

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
50	The change implementation team had enough powers, skills and freedom to carryout change	3.4500	3.4681	2.9250	2.8571	3.5645	3.7143	2.8889
51	Librarian leads change team in the library while implementing change	3.2875	3.5319	3.1750	3.4286	3.7742	3.8571	2.5556
Evaluation								
52	Evaluation of change was always encouraged	3.6125	3.2553	2.9500	3.1429	3.8226	3.7857	2.7778
53	There is always a critical examination of the processes after a significant change is performed	3.3750	3.2340	2.8000	3.2857	3.5323	3.7857	2.2222
54	Library is keen in collecting & analysing employee feed back	3.3625	3.2979	2.6500	3.1429	3.5968	3.4286	2.3333
55	The supervisors accept negative feedback from employees	3.1125	3.8723	2.6750	3.1429	3.0968	2.7857	2.6667
56	Library always considered user feed back while assessing the success of a change	3.5125	3.4255	2.6500	2.9286	3.7097	3.6429	2.7778
57	Library conduct step by step periodic evaluation at every stage of change	3.5500	3.2766	2.6250	2.8571	3.3548	3.5000	2.0000
58	The performance of employees been assessed in a meaningful way	3.5375	3.3830	2.7000	3.5000	3.1774	3.1429	2.4444
59	The employees could be made accountable for not making a change	3.3000	2.9362	2.8000	3.0714	3.4032	3.2857	2.8889
60	Library is able to take corrective action on underperformed employee	3.4875	3.1915	2.5000	3.6429	3.1774	3.5714	2.6667
61	Reviews and rectifications were made as per the feed back	3.3125	3.1277	2.5250	3.0714	3.5484	3.7857	2.7778
62	Library always takes measures to reinforce & maintain change	3.5875	3.1064	2.8500	3.0000	3.5645	3.9286	2.6667

Appendices

Item No.	Statements-	KU	CUSAT	MGU	SSUS	CU	KNR	KAU
63	The introduced change became an integrated mainstream way of working rather than something added on	3.5750	3.0638	2.9000	3.3571	3.5161	3.6429	2.1111
Change sustenance								
64	Positive reinforcement from authority	3.5500	3.1064	2.8500	2.8571	3.5161	3.9286	2.6667
65	Sufficient recognition from authority	3.5750	3.0638	2.9000	3.4286	3.5484	3.6429	2.1111
66	Negative consequences like peer pressure to revert back	3.8250	3.5532	3.5250	3.7143	3.7419	3.7143	3.8889
67	Library always takes measures to reinforce and sustain change	3.5875	3.1064	2.8500	3.000	3.5645	3.9286	2.6667
68	The introduced change became integrated way of working rather than something added on	3.5750	3.0638	2.9000	3.3571	3.5161	3.6429	2.111

APPENDIX II
QUESTIONNAIRE

Data Collection for Ph.D.

This Questionnaire intends to collect data on “**Change management of university libraries in Kerala**”: The study focuses on the practices followed while managing change in your esteemed library system. While filling this questionnaire please be responsive to the **common** features and practices of various changes introduced in your organization previously. The data collected through this questionnaire would be kept confidential and be used only for the research purpose.

Sheeba Francis
Research Scholar
CHMK Library
University of Calicut

1. E-mail address:
2. Gender : Male Female Others
3. Age : Below 30 30 – 45
Above 45
4. Name of University
Mahatma Gandhi university
Cochin University of Science and Technology
University of Kerala
Kannur University
Calicut University
Sree Sankaracharya University of Sanskrit
Kerala Agriculture University

5. Designation:

- University Librarian
- Assistant Librarian//Deputy Librarian
- Junior Librarian/Reference Assistant
- Professional Assistant/Library Assistant

6. Service in the library profession:

- Up to 10 years
- Above 20 yrs
- 11 – 20 yrs

7. Professional qualification:

- B.Li.Sc
- Ph. D
- M.Li.Sc
- UGC NET
- M. Phil
- JRF

8. Please mark responses regarding change identification statements which is most appropriate in your view.

Identifying Change need	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I think libraries cannot survive without change					
I am aware of the changes taking place in the operational environment of the library system					
I am aware of the current position of my library in relation to					

the other leading libraries					
My library anticipate change well in advance					
My library motivates me to accept new ways of working					

9. How often changes are happening in the following factors of your library system?

Internal factors	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Technology					
User requirements					
Staff skills required					
Type of Reading Materials					
Working time					
Service					
Retrieval Mechanism					
Book selection policy					
Downsizing of staff by amalgamation					
Processing of resources					

10. Rank the following sections, where more changes are happening in your library system from 1(most) to 7(least)

Sections	Rank
Digital section	
Acquisition	
Technical	
Circulation	
Maintenance	
Reference	
Periodicals	

11. Please mark your opinion regarding the following external factors bring changes in the library environment:

External Factors	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Information explosion					
Increased demand for better and faster access to information					
Change in teaching and learning					
Emerging new subject					
Universalization of research					
Emphasis on web resources					
Increasing emphasis on self-reliance					

12. Mark your responses regarding strategy formulation in the library system for managing change

Strategy Formulation Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Approaches like SWOT, CQA, PEST, etc. were considered while formulating strategies for change					
Staff participation/suggestion ensured while making strategies to change					
Whenever formulating strategy for change, a defined and achievable goal was foreseen					
The set goal always coincides with the mission, aims and objectives of the library					
The long-term objectives of library were always divided into achievable functional goals					
Library always successful in convincing university authorities (stake holder) about the need to change					

University (stake holder) always support change					
Past experiences were given due consideration while formulating strategies for change					
The prevailing organizational culture was taken into account before finalizing the strategy for change					

13. Please select most appropriate statement regarding planning prior to change:

Planning change statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Planning was always given priority while changes were made in library					
Employee's readiness to change were always analyzed when a change is introduced in the library					
While planning a change in the library, the role of each staff was defined					
Whenever library is making a change, the end user preferences were always kept in mind					
A study on staff skills to carry out their roles were done					
A team for change management in formed to bring in desired changes in library					
The implementation of change was planned with latest and leading practices					
A blue print of actions to be taken is always made before implementation of change					
Enough time is allotted for planning					
A time frame for the completion at every stage of change has been set					
Library ensured adequate organizational structure to carry out the change					

14. Please mark your opinion regarding the following organization obstacles while making changes in your library

Organizational Hurdles	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Insufficient funds					
Lack of infrastructure					
politics in the institution					
Attitude of authority					
Attitude of staff					
Insufficient man power					

15. Please mark the following statements regarding the communication process taking place during change in the library system

Communication statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The need for change is clearly communicated					
The employee were informed about their roles in and after change					
The library authority listens to staff concerns regarding change					
I am getting communication of change on time					
Staff doubt on change were timely clarified					
I am satisfied with the level of information communication conversed to me regarding change					
The content of the message was relevant to the proposed change					
Library makes sure that messages are reaching to employees and being understood					

16. Please mark the periodicity of communication received from authority regarding change in library.

Means of communication	Always	Sometimes	Can't Say	Rarely	Never
Written					
Over telephone/mobile phone					
e-mail					
Whats app					
SMS					
Video conferencing					
Face to face one-to-one (personal)					
Face to face one-to-many (meeting)					

17. Please mark your opinion regarding the following personal resisting factors which back track change in your library system:

Personal obstacles statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Fear of the unknown change					
Lack of skill					
Fear of losing power					
Fear of overload work					
Fear of financial loss					
Lack of education & training					
Fear of losing recognition					

18. Please mark the following statements regarding resistance management:

Resistance management statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
The changes were always					

enforced on staff					
The benefits of changes were communicated appropriately					
Proper training & guidance were provided to handle the change					
Apprehensions (fears) regarding change being addressed in a tangible way					
Employees were allowed to present their views in the library meetings					
Good work & initiatives always welcomed & appreciated in the library					

19. Please mark your perception regarding the change implementation in your library system:

Implementation statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
All activities involved in change were carried out according to the work plan formulated					
Choices were always given to matters that require urgency while making change					
The library ensured proper procedures & inevitable tools for the implementation of change					
The plans relate to change were implemented within a reasonable time					
During the implementation of plan, the difficulties were addressed properly					
The resources allocated					

for implementation were sufficient					
The plans were implemented step by step					
The co-ordination & co-operation among various structures (internal units/departments) were done in a consistent					
Library staff support implementation					
Library always have a hassle free implementation					
The change implementation team had enough powers, skills & freedom to carry out change					
Librarian leads change team in the library while implementing change					

20. Please mark your opinion regarding leadership (Responsible team for different change initiative along with librarian) during change in your library:

Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Leader is a role model in carrying out change					
Motivating others to change					
Committed to change					
Supports change					
Provide recognition for good work					
Bold & take risks in challenging situations					
People trust the leadership in the library					

21. Make responses to the following statements regarding change evaluation & change sustenance procedure done in your library

Evaluation and sustenance statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Evaluation of change was always encouraged					
There is always a critical examination of the processes after a significant change is performed					
Library is keen in collecting & analyzing employee feedback					
The supervisors accept negative feedback from employees					
Library always considered user feedback while assessing the success of change					
Library conduct step by step periodic evaluation at every stage of change					
The performance of employees been assessed in meaningful way					
The employees could be made accountable for not making a change					
Library is able to take corrective action on underperformed employee					
Reviews & rectifications were made as per the feedback					
Library always takes measures to reinforce & maintain change					
The introduced change became an integrated or mainstream way of working rather than					

something added on Positive reinforcement from authority to sustain change					
Sufficient recognition from authority					
Negative consequences eg. peer pressure to revert back					

Kindly give your valuable suggestions and experiences regarding management of change in your institution

Appendix 3

Librarian's Interview Schedule

Creating sense of urgency of change

Consideration of external/internal environment was a priority while making change?

Change readiness of employees were analysed before introducing a change?

User studies conducted before introducing change initiatives?

Whether Employees were able to identify change need?

Areas Where Changes happening in Library

Technological change

change in service

Change in user requirement

mode of operations

Method to anticipate change (Means of identifying forthcoming change)

Expert opinion

Staff Suggestions

User Feedback

Relevant Literature

Learnings from leading/outstanding libraries

Discussions in conferences/Symposium etc.

Strategy Formulation

Any formal method of strategy formulation was used? Details

Is library keen in developing vision and strategy?

Consideration of past experiences was a matter while formulating strategy?

Staff involvement was there in strategy formulation?

Stake holders support change?

Is Library able to convince the authority?

Implementation and Communication

Whether world class tools technology and facility available in libraries to make change?

How employees carry out change?

How change communication has been carried out? Details?

Is there any mechanism to understand the message communicated to employees and are being understood by them?

Change Resistance

Any change resistors are there in library -Which type resistance and resistors?

Whether Resistance disturbs change?

Is there any difficulty in addressing the apprehensions regarding change?

Is rewards and recognitions reduce change resistance?

How do you assess the success of the introduced change

User feed back

Stake holders

Any other method

How the sustenance of the introduced change has been maintained?

LIST OF PUBLICATIONS

Journal Paper

1. Sheeba Francis. & Azeez, A. T. A. (2019). Change management and its relevance to the university libraries in Kerala. *ILIS Journal of librarianship and informatics*, 2(1), 73-75.

Conference Papers

1. SheebaFrancis. & Azeez, A. T. A. (2022). Change readiness: a vital constituent in the management of change in libraries. In Azeez, A. T. A., etal.(Eds.). *Transformation of library ecosystem: terrains and trajectories*. Proceedings of the international online conference on Transformation of library ecosystem: terrains and trajectories (pp.236-242). New Delhi: Ess ess Publications.
2. SheebaFrancis. & Azeez, A. T. A. (2021). Resistance management: an important facet in the management of change in libraries. In Ashraf, T., etal., (Eds.). *Emerging trends and technologies in library services: an exploration*. Proceedings of the international conference on Emerging trends and technologies in library services: an exploration. (pp.159-163). New Delhi: Synergy Books India.
3. SheebaFrancis. (2019). Human resource performance evaluation: Techniques and implications for libraries. *National conference on innovations and transformations in libraries*.
4. SheebaFrancis. , Azeez, A. T. A., & Sreelatha, K.(2017). Layered integration for digital preservation: changing trends. In Abidi, H. J., Bhardwaj, R.K., &Ashraf, T. (Eds.).2nd international conference of Asian libraries on Expanding digital footprints: role of libraries and information centres. (pp.307-311). New Delhi:Asian Library Association.