

## **An Exploration of Factors for HR Development in Academic Library: A Prospective in Context of Jharkhand Academic**

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### **ABSTRACT**

The research found that the library needs a comprehensive HR development strategy that connects with its purpose and strategic objectives and offers a range of training and education. The research offers a flexible, inclusive, and accessible approach for all library personnel, regardless of location or job. It should also encourage lifelong learning, professional development, and diversity, equality, and inclusion in library operations and services. A needs assessment to determine academic library staff HR development requirements is advised. Using this evaluation, create a complete HR development plan that includes seminars, webinars, conferences, mentorship programs, and online courses. Data and analytics should be utilized to assess the HR development plan's efficacy and suggest opportunities for improvement and innovation. A good, supportive work atmosphere that honors library staff's contributions and well-being is also advised. The research concludes that academic libraries in Jharkhand, India, need a comprehensive and strategic HR development strategy. Academic libraries may recruit and retain personnel, improve service quality, and support their institutions' academic and research missions by investing in HR development. Human capital actively grows all parts of society, as is well known. All resources depend on human resource efficiency. HRD aims to motivate professionals and provide a psychologically friendly environment. University library human resources personnel face several obstacles in such scenarios. The academic library is one of the few administrative units on campus where faculty, exempt, and non-exempt employees, part-time employees, permanent employees, temporary employees, student employees, and non-student employees interact in a variety of ways. None of these other offices have a mix of employees that patrons can mistake for one another. When a consumer enters a library service station, the librarian, paraprofessional, or student staff generally look the same. Despite working at the same service desk, staff members are recruited, processed, and supervised differently according to the institution's regulations and standards. When a company stays open late, particularly on weekends, and has a diverse staff, challenges emerge. Many libraries operate 24/7 in the weeks before final examinations. Employee schedules, shifts, overtime pay, and remuneration depend on their needed hours. Library HR officers have several roles. However, most will provide some conventional alternatives. The library's HR officer develops, implements, coordinates, and monitors all HR programs. The research shows that academic libraries in Jharkhand require HR development and a deliberate approach to training and education. Academic libraries may improve services and support academic and research missions by investing in their employees.

**Keywords:** *HRD, ICT, Academic Library, Human Resource Management, Library Network.*

## I. INTRODUCTION

The management of the nation's human resources is completely responsible for the country's development. If this human resource is not effectively managed, it will be of little service to the country. Civilized human beings are one of the main foundational concerns for the betterment of civilization. The most visible part of the vast human resource development is academic library professional staff development and new ICT concept training. HRD plays an important part in the library's chrysalis. HRD combines managerial and operational tasks. The success of any firm is totally reliant on the impact of human resource development, since employee training plays a significant part in its successful growth. The need for professional and qualified employees, particularly in ICT, is critical for the library's success.

Information communication technologies have introduced a new way of storing and transmitting data. Many services have been added to libraries as a result of information and communication technology. It aids in the removal of communication barriers such as distance and time. The efficiency of libraries will continue to increase as technology progresses. It allows data to be sent from a library to anyone in the globe at any time via a communication network such as the internet. Library digitalization is also very important, and it is being implemented in practically all academic libraries. While utilising library automation software, certain phases are completed. ICT has changed the types of services provided by academic libraries all over the world, but it also necessitates some infrastructure and manpower development that are currently lacking in academic libraries and knowledge treasuries, as well as a complete shift in library work in the use of library professionals and library users of HRD and ICT in the digital era.

### **Prospect of HR Development in Academic Library in Jharkhand**

Human Resource (HR) development in an academic library of Jharkhand can have a significant impact on its overall success and growth. Here are a few prospects:

- **Employee Training and Development:** Investing in HR development programs for employees can help them acquire new skills and knowledge, improve their performance, and stay current with the latest industry trends.
- **Improved Retention:** Providing opportunities for growth and development can improve employee satisfaction, leading to higher retention rates and reduced turnover.
- **Increased Productivity:** When employees are equipped with the right skills and resources, they can be more productive and efficient in their work.
- **Better Reputation:** A library with a strong HR development program can establish a positive reputation as a great place to work, attracting top talent and supporting its long-term success.
- **Competitive Advantage:** By investing in HR development, an academic library can differentiate itself from others and gain a competitive advantage in attracting and retaining the best employees.

The HR development is crucial in an academic library of Jharkhand and can bring numerous benefits to the organization, employees, and stakeholders. Jharkhand is a state in eastern India, known for its rich cultural heritage, mineral resources, and agriculture. Jharkhand has several academic libraries, including those of universities, colleges, and research institutes. In recent years, there has been a growing demand for HR development in academic libraries in Jharkhand, in order to improve the quality of library services

and meet the changing needs of users. This article discusses the prospects of HR development in academic libraries in Jharkhand, with a focus on the challenges and opportunities in this area.

The importance of Human Resource Development (HRD) in academic libraries cannot be overstated. It is crucial for academic libraries to have a well-trained and motivated workforce to deliver excellent services to their users. This paper will discuss the HRD developments in academic libraries, including the current state of HRD practices, challenges, and opportunities.

### **Current State of HRD in Academic Libraries**

HRD in academic libraries involves various practices, including training, coaching, mentoring, and development programs. The primary objective of HRD practices in academic libraries is to improve the knowledge, skills, and attitudes of library staff to meet the changing needs of the library and its users. However, the current state of HRD practices in academic libraries is mixed. Some libraries have robust HRD programs, while others lack adequate HRD practices.

### **Challenges in HRD in Academic Libraries**

Several challenges hinder effective HRD in academic libraries. First, there is a shortage of qualified HRD professionals in libraries, resulting in a lack of expertise to develop and implement effective HRD practices. Second, many academic libraries lack adequate funding to invest in HRD programs. This situation limits their ability to offer relevant training and development programs to their staff. Third, staff resistance to change is a significant challenge in HRD practices. Some employees may be reluctant to participate in training programs, citing workload or other reasons. Fourth, the rapid pace of technological changes and the need to stay current with new developments pose significant challenges to academic library staff.

### **Opportunities in HRD in Academic Libraries**

Despite the challenges, there are several opportunities to improve HRD practices in academic libraries. First, technology presents new opportunities for learning and development. E-learning and online training courses can be used to train staff remotely and at their convenience. Second, the changing nature of library work, including the need to collaborate with other professionals, presents opportunities for staff development. Third, the increasing use of data and analytics in libraries creates opportunities for staff to develop new skills in data analysis and management.

### **Challenges in HR Development in Academic Libraries in Jharkhand**

One of the main challenges in HR development in academic libraries in Jharkhand is the shortage of qualified and experienced librarians. According to a report by the University Grants Commission (UGC), there is a shortage of librarians in higher education institutions in India, including Jharkhand. The report states that only 47% of the sanctioned posts of librarians are filled in these institutions, indicating a significant gap in the availability of trained professionals.

Another challenge is the lack of training and professional development opportunities for librarians. Many librarians in Jharkhand do not have access to training programs, conferences, and workshops, which are crucial for keeping up with the latest trends and technologies in the field. This lack of professional development opportunities can lead to stagnation and a lack of innovation in library services.

## **Opportunities for HR Development in Academic Libraries in Jharkhand**

Despite the challenges, there are several opportunities for HR development in academic libraries in Jharkhand. These include:

- **Digital Transformation:** With the increasing use of digital resources and technologies in libraries, there is a need for librarians to have skills in areas such as data management, information technology, and digital preservation. This presents an opportunity for HR development in these areas.
- **User Engagement:** Libraries in Jharkhand can benefit from HR development in areas such as user engagement, communication, and marketing. By developing these skills, librarians can better understand the needs of users and provide them with high-quality services.
- **Collaborative Partnerships:** Libraries in Jharkhand can also benefit from HR development in areas such as collaboration and partnership-building. By developing skills in these areas, librarians can work with other institutions and organizations to share resources and expertise.
- **Leadership and Management:** HR development in leadership and management can help librarians in Jharkhand to develop the skills needed to lead and manage teams, build effective strategies, and implement best practices.

## **Strategies for HR Development in Academic Libraries in Jharkhand**

Human resource development (HRD) is the process of enhancing the skills, knowledge, and capabilities of an organization's workforce. It is a continuous process that enables an organization to achieve its goals and objectives through its human capital. In academic libraries, HRD is crucial for the development and success of the organization. Jharkhand is a state in eastern India that has several academic libraries. This paper presents strategies for HR development in academic libraries in Jharkhand.

### **Human Resource Management (HRM)**

Management of a company's personnel, from seeking for potential workers to directing their activities once hired, is known as human resource management (HRM). Human resource management, or HRM, is a term used interchangeably with (HR). Human resources (HR) professionals often draught, implement, and monitor corporate policies that affect employees and the firm's relationship with its workforce. Human resources is a word that was initially used in the early 1900s and then became popular in the 1960s to refer to an organization's workforce as a whole.

Management of a company's human resources with an eye toward seeing them as an asset to the company is known as human resource management (HRM). People who work for an organisation are often called "human capital" in discussions like these. The aim, like with any other asset, is to maximise return on investment while minimising risk when it comes to personnel (ROI).

Human capital management (HCM), a more recent HR technology phrase, has been used more often than HRM. Large and medium-sized businesses, as well as other types of organisations, have increasingly relied on HCM software to handle a variety of human resource management tasks.

### **The Importance of Human Resource Management**

Human resource management (HRM) focuses on managing employees to further an organization's goals and values. If they execute their jobs successfully, human resources managers may assist bring in new personnel with the right set of abilities and aid in the ongoing development of existing staff so that they can more effectively achieve business goals. In order to maintain or enhance a company's success, human

resource management (HRM) is essential. Human resource managers should also keep an eye on the employment market as a way to ensure their companies continue to be competitive. This may include adjusting salaries and perks to be more competitive, organising activities to prevent staff burnout, and reorganising departments to better suit current and future business needs.

### **Development of Library Network in India**

The term "Library Network" is used to describe a system in which several libraries operate together under a common set of rules and regulations to better serve their patrons. Each library in the network should strive to build its own distinctive collection while also working together to eliminate wasteful duplication of resources. On an as-needed basis, libraries will share their collections with one another. A working group of the Planning Commission proposed a modernised plan on National Policy on Library and Information System to the Ministry of HRD, Govt. of India on the seventh five-year plan, which began in 1985, ushering in the era of library networks. Based on a study submitted to the UGC in 1987 by the Association of Indian Libraries, the Indian government's Department of Science and Industrial Research (DSIR) began advocating for a more unified approach to library automation and networking.

### **Library Networks in India Are**

- The library system serving the Ahmedabad, India, region is known as ADINET (Ahmedabad Library Network). The National Information System for Science and Technology provided funding for its inception in 1994. (NISSAT). Library patrons in Ahmedabad may use ADINET, since it serves not just private libraries but also public libraries, schools, and institutions.
- The JRD Tata Memorial Library in Bangalore, India, funded the creation of the Bangalore Academic Library Network (BALNET) in 1995. The Bangalore Area Library Network (BALNET) is a service for library patrons in the region.
- NISSAT funded the establishment of the Bombay Library Network (BONET) in 1992 at the National Centre for Software Technology (NCST) in Mumbai.
- In 1986, NISSAT provided funding for the creation of the Calcutta Library Network (CALIBNET). CALIBNET was created to improve the connectivity between libraries and other information resources in the East.
- In 1988, with funding from NISSAT, the India International Centre Library in Delhi founded the Developing Library Network (DELNET), which became a legally recognised organisation in 1992. Originally known as the Delhi Library Network, its primary purpose was to facilitate the exchange of resources among its affiliated libraries.
- With the goal of fostering appreciation for Indore's rich cultural variety, the Indore Library Network (INDOLIBNET) was founded.
- In 1991, the University Grants Commission launched a programme called Information and Library Network (INFLIBNET) with the goal of creating a channel of communication between the libraries and information centres at universities, colleges, UGC information centres, institutes of national importance, R&D information centres, etc. Its original home was on the Ahmedabad campus of Gujarat University, but it was relocated to Gandhinagar.
- In 1993, the Madras Library Network (MALIBNET) was founded as an organisation to facilitate collaboration between libraries and other information resources in the Madras area. Universities, colleges, R&D centres, businesses, and people may all join MALIBNET as members.



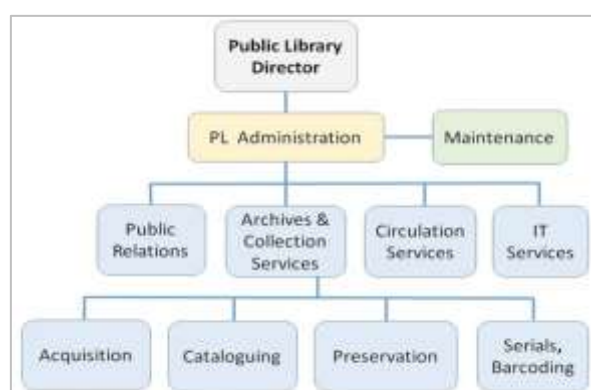
- It was in 1994 that the Central Food Technological Research Institute (CFTRI) Mysore received funding from NISSAT to develop the Mysore Library Network (MYLIBNET). Mysore Library and Information Network (MYLIBNET) participates in the Mysore City Library Consortium (MCLC).
- Management and business library professionals came together to create Management Libraries Network (MANLIBNET) to share materials and knowledge. At the inaugural conference held in Ahmadabad in 1998, MANLIBNET was founded. The event was co-hosted by the Indian Institute of Management (IIM) Ahmadabad and the Ahmadabad Management Association.
- In 1992, the National Institute of Science and Technology (NISSAT) provided funding for the establishment of the Pune Library Network (PUNENET), a collaborative effort between the University of Pune, the National Chemical Laboratory (NCL), and the Centre for the Development of Advanced Computing (C-DAC).
- The Government of West Bengal's Department of Mass Education Extension & Library Services established the West Bengal Public Library Network (WBPLNET). If you're looking for the best library in the system, go no farther than the State Central Library of West Bengal.
- Knowledge Resource Center (MoES KRCNet) is a Library Network portal created by the Ministry of Earth Sciences and the Informatics Department for use by all Earth Science institutions.

## Organizational Structure

Depending on factors including its size, funding, available space, and membership strength, a public library may have anywhere from a few dozen to several hundred different sections.

Managing and administering a library entails a wide range of activities, including collecting, cataloguing, conserving, and distributing books and digital information to the public. It entails overseeing the library's general operations, including staffing, budgeting, training, and development.

Look at this organisational chart to see how things are structured. An elementary public library building is shown.



**Fig. 1: Organizational Structure**

## II. BACKGROUND

**Joshi et al. (2019)** The higher education system in India is the biggest in the world when measured by the number of institutions, and it is the second largest when measured by the number of students enrolled. Even though there are presently 36.6 million students attending higher education institutions, the Gross Enrolment Ratio (GER) is still quite low at 25.8%. In India, there are 903 universities and 39050 colleges, and this massive network of higher education institutions also includes a sizable private sector that has

arisen and undergone extremely fast expansion over the course of the last two decades. In spite of this expansion, the higher education system in India is confronted with a number of difficulties including equality, efficiency, and quality. The multifaceted variety of the social, economic, and cultural patterns that have emerged throughout the course of history presents formidable obstacles to fairness. The quality of higher education in India, as well as the institutions' dedication to providing excellent education, will be the determining factor in the country's future prospects in the context of international competitiveness. The rates of return to higher education have been positive, thanks to the expansion of the economy and the favorable demographic circumstances that have prevailed. Higher education's effectiveness is also reflecting opaque successes as a result of the high percentage of unemployment among highly educated people. This high rate of unemployment among highly educated people may be linked to the policy failure to instill necessary skills and knowledge. Unfortunately, India's higher education system is not yet inclusive, creative, or internationally competitive.

**Randev et al. (2019)** The idea of sustainability has thoroughly permeated all of the many areas of management, such as supply chain management, organizational behaviour, human resource management, and strategic management, among many others. But in recent years, sustainable human resource management, also known as S-HRM, has attracted a considerable amount of interest from industry practitioners as well as academicians. This is largely attributable to the escalation of the adverse impact that existing HRM approaches are having on employees, society, and the environment (Mariappanadar, 2003, *International Journal of Social Economics*, 30(8), 906–923; 2014a, *Human Resource Management Review*, 24(4), 313–329; 2014b, the sustainability of human resources is something that everyone wants because of the significant consequences that it has not just for individuals but also for organizations. It has been shown in previous research that the implementation of effective human resource management (HRM) practices is critical to the success and continued existence of an organization. In addition, the harmful impact of high-performance work systems and their existing HRM practices on the well-being of employees and their families has made it even more important for industry practitioners to identify mechanisms to reduce employee harm and increase human resource sustainability for the growth and well-being of organizations. This is because high performance work systems have been shown to negatively affect the well-being of employees and their families. According to a research report published in 2010 by the Society for Human Resource Management and a few other scholars, S-HRM can help HRM practitioners reduce the negative impact of business practices on employees, society, and the environment (Cohen & Taylor, 2012, *HR's role in corporate social responsibility and sustainability*; Daily & Huang, 2001, *International Journal of Operations & Production Management*, 21(12), 1539–1552; Dumisani, 2009, *Human resources role in sustainable development*). This research report was published in on the other hand, S-HRM has only been investigated here and there, thus their knowledge of it is fragmented. It has been characterized in a general sense with the assistance of a number of different viewpoints that have been taken from the literature on strategic HRM, corporate social responsibility, Green HRM, and sustainable work systems. The purpose of this article is to investigate the previous research on S-HRM so that a more in-depth comprehension of the idea may be achieved. This article emphasizes the development of strategic human resource management (S-HRM) as well as its consequences for workers, HR managers, and the organizations that have been investigated in the previous literature. This is accomplished via an extensive study of the relevant literature.

**Ghara et al. (2020)** 4.3 million students are enrolled in India's higher education system, which comprises 1043 universities and more than 43858 college level institutions. India's higher education system is both enormous and fundamentally diversified. Planners, researchers, and administrators in education may

regularly find themselves in a position where they need to analyze several indicators of education using data. The purpose of the research is to analyze the differences and similarities across the states using a selection of variables from the AISHE database. The factors that are taken into consideration include the following: the number of universities, colleges, and institutions; the number of students enrolled (STD) at various levels and categories; the average number of enrolment per college (AEC); the college population index (CPI), which is the number of colleges for every one lakh people; the gross enrolment ratio (GER); the gender parity index (GPI); the Human Development Index; and other factors. For the purpose of this investigation, only fourteen states, namely Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Karnataka, Kerala, Odisha, Rajasthan, Tamil Nadu, and West Bengal, were taken into consideration. Over the course of the last nine years, from 2011-2012 to 2019-2020, comparisons of the states have been made taking into account each variable.

**Radhika et al. (2020)** In the years 2001 and 2002, the government of India's central government initiated the massive flagship education initiative known as the Sarva Shiksha Abhiyan (SSA). The provision of elementary education to all children between the ages of 6 and 14 as universally as possible is one of the fundamental aims. Implementation of the Right of Children to Free and Compulsory Education Act is presently carried out mostly by the SSA (RTE). In order to achieve its goals, which include enrolling all children in school and ensuring that they remain enrolled until the upper primary stage by the year 2010, gender and social category gaps in enrollment, retention, and learning must be closed, and the learning achievement levels of children in the primary and upper primary stages must be significantly raised. One of its goals is to ensure that by the year 2010, all children are enrolled in school and that they remain enrolled until the upper primary stage. The evaluation of the steps taken in India to bring the Sarva Shiksha Abhiyan (SSA) to fruition may be found in this particular piece of writing.

Human Resource (HR) development in academic libraries is important to support the growth and success of academic institutions in Jharkhand. HR development initiatives can include training and professional development opportunities for library staff, as well as programs to attract and retain skilled workers. This can include offering competitive salaries and benefits, creating a supportive work environment, and providing opportunities for career advancement. Effective HR development can also improve staff morale, enhance the quality of library services, and support the library's mission to serve the academic community.

### **Problem Statements**

It should come as no surprise that various challenges face libraries. It's possible that the issue is caused by the vastness of the library, as well as its organisational makeup and the goals it seeks to accomplish. We are well aware that the process of national development is a phenomenon that exists across several dimensions and is comprised of both economic and social forces. As a result of these factors, the government makes efforts to enhance the level of expertise, knowledge, and attitude possessed by personnel in their execution of operational tasks.

The issues of low compensation and significant expenses associated with training and development are among the most upsetting challenges faced by any library. Therefore, the management is likely to demonstrate a high level of understanding of her requirements and goals for the foreseeable future at this point. The question that needs to be answered is how frequently the impact of employee development and training is felt by the organisation when there are improper incentives, inadequate training and working conditions, poorly designed equipment, an overemphasis on a single method of operation, fear, and



distrust, or retrenchment. Because of this, it is essential to determine the "youth" of those competing for these positions, not only because the information that could be gained from doing so would be of immense policy value to the organisation, but also because of the potential it has to raise the consciousness of the average worker regarding where and how the salvation of the library of the library lies. According to Bobbe, in order for training and employee development to be successful and meaningful, learners need to have the essential ability to absorb the new information gained through training. The managers of the library cannot thus fix all of its difficulties; rather, they will attempt to reduce them so that the library can fulfil its aims. Training and development opportunities for workers are thus one of the strategies that may be used to reduce the severity of the issue.

There can be several problem statements regarding HR development in academic libraries in Jharkhand:

- a. **Attracting and Retaining Skilled Staff:** Finding and retaining highly qualified and motivated library staff can be a challenge in an increasingly competitive job market.
- b. **Limited Budget:** Academic libraries may have limited budgets for HR development initiatives, making it difficult to provide comprehensive training and professional development opportunities for staff.
- c. **Lack of Career Advancement Opportunities:** Library staff may feel limited in their career growth and development within the library, leading to high turnover rates.
- d. **Outdated HR Practices:** HR practices in academic libraries may be outdated and not in line with current best practices, making it difficult to attract and retain staff.
- e. **Resistance to Change:** Some library staff may resist change and be resistant to new HR development initiatives, making implementation difficult.

These problem statements highlight the need for effective HR development strategies to support the growth and success of academic libraries in Jharkhand.

### **Research Gaps**

The research gaps in HR development in academic libraries in state Universities of Jharkhand can include:

- a. **Lack of empirical research:** There may be a lack of empirical research on the HR development needs and challenges faced by academic libraries in state Universities of Jharkhand.
- b. **Limited Focus on Regional Context:** HR development research in academic libraries may not take into account the unique challenges and context faced by libraries in state Universities of Jharkhand.
- c. **Inadequate attention to Library Staff Needs:** Research may not sufficiently address the needs and concerns of library staff, including training, career development, and job satisfaction.
- d. **Inadequate consideration of Library Culture:** Research may not fully consider the impact of library culture and organizational structure on HR development initiatives.
- e. **Inadequate understanding of technology impact:** Research may not fully consider the impact of technology on HR development in academic libraries, including how technology can support or hinder HR development initiatives.

Addressing these research gaps can help to improve the understanding of HR development in academic libraries in state Universities of Jharkhand and inform effective HR development strategies.

### III. RESEARCH METHODOLOGY

An introduction is the opening section of a piece of writing that provides context and sets the stage for the content that follows. In academic writing, an introduction is typically the first paragraph or section of an essay, research paper, or other written work. The purpose of an introduction is to grab the reader's attention, provide some background information on the topic, and give a preview of what the rest of the paper will cover. It should be engaging and informative, and set up the main argument or thesis statement that the author will be making. A well-crafted introduction can make a big difference in the reader's perception of the paper, and can help to establish the author's credibility and expertise on the topic. Therefore, it is important to spend time crafting a strong introduction that effectively communicates the purpose and scope of the paper.

#### Objective

- a) To explore the concept application of HR and in academic library in state University of Jharkhand.
- b) To find and explore the need of enhancement in HR components in library management.
- c) To analysis the impact of HR component for development of academic library in state universities of Jharkhand.
- d) To conduct the comprehensive study of need of HR and academic library in prospective of State Universities of Jharkhnad.

We can provide you with some general insights into HR development in academic libraries, but we do not have access to specific information about the state Universities of Jharkhand Academic library. Nonetheless, we will try my best to provide you with some relevant information.

HR development in academic libraries is essential to ensure that the library has the right mix of talent, skills, and experience to support the academic and research needs of the institution and its users. Here are some key areas that can be focused on for HR development in academic libraries in state Universities of Jharkhand:

- a) **Recruitment and Retention:** The library can focus on recruiting and retaining talented individuals who have the necessary skills and qualifications to meet the needs of the institution. This can be done by developing a comprehensive recruitment strategy that includes job postings, outreach efforts to relevant academic programs, and competitive compensation packages.
- b) **Professional Development:** Academic libraries should invest in their employees' professional development to ensure that they stay up-to-date with the latest trends and technologies in the library field. This can include training programs, conferences, and workshops.
- c) **Succession Planning:** Succession planning is essential to ensure that the library has a pipeline of talented individuals who can take over key positions as employees retire or move on to other positions. Succession planning involves identifying potential successors, developing their skills and knowledge, and providing them with opportunities to take on leadership roles.
- d) **Diversity, Equity, and Inclusion:** HR development should prioritize diversity, equity, and inclusion (DEI) efforts to ensure that the library's workforce is reflective of the institution's diverse student population. DEI efforts can include outreach to underrepresented groups, training programs on implicit bias, and developing a culture of inclusion.
- e) **Employee Engagement:** HR development should also focus on employee engagement to ensure that employees feel valued and invested in the success of the library. Employee engagement efforts can include regular feedback sessions, recognition programs, and opportunities for employee input into decision-making processes.

## **Exploration of Factors**

### **Skill gap analysis (SGA)**

Skill gap analysis (SGA) is a process of identifying the difference between the current skills and the required skills of employees in an organization. It is an important tool used in human resource development to identify the areas where training and development interventions are needed.

In the context of academic libraries in Jharkhand, SGA can help to identify the skills and competencies that are required for employees to meet the changing needs of users and stakeholders. This can include skills related to information technology, research support, collection development, and user services.

### **Training and Development Programs: (TDP)**

Training and development programs (TDPs) are critical components of human resource development in academic libraries in the prospects of Jharkhand Academic. TDPs are designed to improve the skills, knowledge, and abilities of employees to enable them to perform their jobs more effectively and efficiently.

### **Recruitment and Selection Process: (RSP)**

Recruitment and selection process (RSP) is a critical component of HR development in academic libraries in the prospects of Jharkhand Academic. The process involves attracting and selecting the most suitable candidates for vacant positions in the library. A well-planned and executed RSP can help academic libraries to find and retain the most qualified and motivated employees.

The recruitment process involves identifying job vacancies, creating job descriptions and specifications, and attracting potential candidates through various sources such as job portals, referrals, and social media. In Jharkhand Academic, academic libraries can also collaborate with local universities and colleges to identify potential candidates.

Once potential candidates have been identified, the selection process begins. This involves screening resumes and conducting interviews to assess the candidate's skills, qualifications, and experience. Other selection methods may include aptitude tests, group discussions, and reference checks.

It is important that the RSP is transparent, fair, and unbiased to ensure that the best candidates are selected. Academic libraries in Jharkhand can achieve this by implementing standardized selection criteria, providing equal opportunities to all candidates, and maintaining accurate records of the recruitment and selection process.

Effective RSP in academic libraries can have a positive impact on the library's performance and reputation. By attracting and retaining talented and motivated employees, academic libraries can enhance their service quality, increase user satisfaction, and ultimately contribute to the growth and development of Jharkhand's academic sector.

### **Performance Management System: (PMS)**

Performance management system (PMS) is a crucial component of human resource development in academic libraries. PMS is a process that involves setting clear goals and expectations for employees, providing feedback on their performance, and identifying opportunities for development and improvement. The ultimate goal of PMS is to enhance employee performance, productivity, and job

satisfaction. In the context of academic libraries in the prospects of Jharkhand Academic, the implementation of PMS can help to address some of the challenges faced by academic libraries in the region, such as low employee morale, high turnover rates, and limited resources. PMS can provide a structured framework for employee development and performance improvement, which can help to improve the overall quality of library services and enhance the reputation of the institution.

### **Employee Engagement Programs: (EEP)**

Employee engagement programs (EEP) are initiatives designed to increase employee involvement, commitment, and satisfaction in the workplace. These programs aim to create a positive work environment that promotes employee well-being, motivation, and productivity. In the context of HR development in academic libraries in the prospects of Jharkhand Academic, EEPs can play an important role in attracting and retaining qualified and motivated employees.

### **Succession Planning: (SPL)**

Succession planning (SPL) is an important process in human resource development that involves identifying and developing key employees who can fill critical roles within an organization. In the context of academic libraries in Jharkhand, SPL can be used to ensure that there is a pool of talented and qualified individuals who can take on leadership roles and ensure the continuity of library operations.

### **Sampling Technique**

Sampling technique refers to the method used to select a sample from a larger population for the purpose of research. The sampling technique used should be appropriate for the research question or hypothesis and should result in a representative sample that accurately reflects the larger population.

The sampling technique for the study on HR development in an academic library in the prospects of Jharkhand Academic will depend on the research design and the population of interest. In this case, the population of interest would be all employees in academic libraries in Jharkhand Academic, and the research design involves both quantitative and qualitative data collection methods. Therefore, a combination of probability and purposive sampling techniques can be used.

First, probability sampling technique can be used to select a representative sample of employees from the population. A simple random sampling technique can be used to randomly select employees from the academic libraries in Jharkhand Academic. The sample size can be determined using an appropriate sample size calculation method, taking into account the size of the population and the desired level of precision and confidence.

Second, purposive sampling technique can be used to select key informants for the qualitative data collection method. This technique involves selecting participants based on their knowledge, experience, or relevance to the research questions. In this case, key informants can include HR managers, librarians, and support staff in academic libraries in Jharkhand Academic. The sampling can be done using criteria such as their job title, experience, and involvement in HR development practices.

By using both probability and purposive sampling techniques, the study can obtain a sample that is representative of the population while also ensuring that key informants are included in the qualitative data collection. The combination of these sampling techniques can enhance the generalizability of the findings and provide a comprehensive understanding of HR development practices in academic libraries in Jharkhand Academic.

There are various sampling techniques, including:

- a) **Random Sampling:** In this technique, participants are selected randomly from the population using a probability-based method, such as simple random sampling or stratified random sampling. This technique ensures that every member of the population has an equal chance of being selected, and it is often considered the most accurate way to obtain a representative sample.
- b) **Convenience Sampling:** In this technique, participants are selected based on their accessibility and willingness to participate. This technique is quick and easy, but it may not result in a representative sample and may introduce bias into the study.
- c) **Snowball Sampling:** In this technique, participants are selected based on referrals from other participants in the study. This technique is useful for studying hard-to-reach populations, but it may also result in a biased sample.
- d) **Quota Sampling:** In this technique, participants are selected based on specific quotas set for certain demographic characteristics, such as age, gender, or race. This technique ensures that the sample reflects the population in terms of these characteristics, but it may not result in a representative sample overall.

The choice of sampling technique will depend on the research question or hypothesis, the nature of the population being studied, and the resources available to the researcher. It is important for researchers to carefully consider the advantages and disadvantages of each technique and select the one that will result in the most representative sample for their study.

### **Conduct of the Study**

The conduct of the study refers to the actual implementation of the research design, including data collection, analysis, and interpretation. This phase of the research process involves putting the research plan into action and collecting data to answer the research question or hypothesis.

The conduct of the study typically involves the following steps:

- a) **Data Collection:** This involves collecting data using the selected method and sampling technique. Depending on the research design, data can be collected through surveys, experiments, interviews, observations, or other methods.
- b) **Data Entry and Cleaning:** This involves entering the collected data into a software program for analysis and cleaning the data to remove errors, missing values, or outliers.
- c) **Data Analysis:** This involves using statistical techniques to analyse the data and test the research question or hypothesis. The analysis can include descriptive statistics, inferential statistics, or both.
- d) **Interpretation of Results:** This involves interpreting the results of the analysis and drawing conclusions about the research question or hypothesis. The interpretation should be based on the statistical significance of the results and their practical implications.
- e) **Reporting of Findings:** This involves presenting the findings of the study in a clear and concise manner, including the research question or hypothesis, the methods used, the results, and the interpretation. The report should also discuss the limitations of the study and provide recommendations for future research.

It is important for researchers to follow ethical principles in the conduct of the study, including obtaining informed consent from participants, protecting their confidentiality and privacy, and avoiding any harm or discomfort to them. Researchers should also ensure that the data collected is reliable and valid, and that the statistical analysis is appropriate for the research question or hypothesis.



## **Variables Under Study and Their Measurement**

Variables are the characteristics or attributes that can vary or change in a study. Variables can be classified into different types, including independent variables, dependent variables, and control variables. The measurement of variables is an important aspect of research, as it determines how the variables are defined, operationalized, and measured in the study. In the case of a study on HR development in an academic library in the prospects of Jharkhand Academic, the variables under study may include:

- a) **Independent Variables:** These are the variables that are manipulated or controlled in the study, and they may include factors that can influence HR development in the academic library. Examples of independent variables in this study could be funding, leadership, and training programs.
- b) **Dependent Variables:** These are the variables that are affected by the independent variables and are measured to determine their relationship. Examples of dependent variables in this study could be employee satisfaction, job performance, and retention rates.
- c) **Control Variables:** These are the variables that are held constant to minimize their influence on the relationship between the independent and dependent variables. Examples of control variables in this study could be employee demographics, years of experience, and job roles.

The measurement of variables is crucial for ensuring the reliability and validity of the study results. Variables can be measured using different methods, including self-reported surveys, performance assessments, and observational data. The measurement method should be chosen based on the nature of the variable and the research question. For example, employee satisfaction can be measured using a Likert scale survey, while job performance can be measured using objective performance metrics or supervisor ratings. It is important to ensure that the measurement of variables is standardized and consistent across all participants in the study. This can be achieved by using established measurement instruments, pretesting the instruments, and training the data collectors. The data collected should be recorded accurately and stored securely to maintain the integrity of the study results.

## **Data Collection**

For the study on HR development in an academic library in the prospects of Jharkhand Academic, both quantitative and qualitative data collection methods can be used.

For quantitative data collection, a survey questionnaire can be used to collect data on various HR development practices, employee outcomes, and demographic information. The survey can be administered to a representative sample of employees in academic libraries in Jharkhand Academic using online or paper-based methods. The survey questions can be designed using Likert scales, multiple-choice questions, and open-ended questions to collect both quantitative and qualitative data. The survey can be pre-tested and validated to ensure its reliability and validity.

For qualitative data collection, in-depth interviews can be conducted with key informants such as HR managers, librarians, and support staff in academic libraries in Jharkhand Academic. The interviews can be semi-structured and cover topics such as HR development practices, challenges, and opportunities, and recommendations for improvement. The interviews can be recorded, transcribed, and analyzed using qualitative data analysis software such as NVivo or Atlas.ti. The data collected can be analyzed using content analysis or thematic analysis to identify themes, patterns, and relationships.

To ensure the quality of data collection, the research team can undergo training on research ethics and data collection methods. The research instruments can be pilot-tested and reviewed by experts in the field. The research team can also conduct regular checks on the data quality and take corrective measures when necessary.

By using both quantitative and qualitative data collection methods, the study can obtain a comprehensive understanding of HR development practices in academic libraries in Jharkhand Academic. The data collected can be triangulated to enhance the validity and reliability of the findings.

### **Data Analysis**

Data analysis is the process of examining, cleaning, transforming, and modeling data to extract meaningful insights and conclusions. It is an important step in the overall process of data-driven decision-making, which involves using data to inform and guide business decisions.

Data analysis typically involves several steps, including:

- a) **Data Collection:** This involves gathering data from various sources, such as databases, surveys, or social media platforms.
- b) **Data Cleaning:** This involves identifying and fixing any errors or inconsistencies in the data, such as missing values or outliers.
- c) **Data Transformation:** This involves converting the data into a format that can be analyzed, such as creating new variables or aggregating data.
- d) **Data Modeling:** This involves using statistical or machine learning techniques to identify patterns, trends, or relationships in the data.
- e) **Data Visualization:** This involves creating visual representations of the data to help communicate insights and findings to stakeholders.

The results of data analysis can be used to inform a wide range of business decisions, from product development and marketing strategies to operational improvements and financial forecasting. Data analysis can also be used to identify opportunities for cost savings, process improvements, or new revenue streams.

Overall, data analysis is a critical component of modern business operations, as it allows organizations to leverage data to make more informed and effective decisions.

### **Ethical Considerations**

Ethical considerations are an important aspect of any data analysis project. In general, ethics refers to principles and standards of conduct that govern individual and organizational behavior. In the context of data analysis, ethical considerations relate to issues such as data privacy, data security, confidentiality, and transparency.

Some common ethical considerations in data analysis include:

- a) **Data Privacy:** Data privacy is the right to control how one's personal information is collected, used, and shared. Data analysts need to ensure that they are collecting and using data in compliance with privacy regulations and that they are taking steps to protect the privacy of individuals whose data is being analyzed.

- b) **Data Security:** Data security refers to measures taken to protect data from unauthorized access, use, or disclosure. Data analysts need to ensure that they are using secure methods to collect and store data, and that they are taking steps to prevent data breaches or cyberattacks.
- c) **Confidentiality:** Confidentiality refers to the obligation to keep sensitive or private information secret. Data analysts need to ensure that they are not sharing confidential data with unauthorized parties and that they are taking steps to protect the confidentiality of individuals whose data is being analyzed.
- d) **Transparency:** Transparency refers to the openness and accountability of data analysis processes. Data analysts need to ensure that they are being transparent about the methods and techniques they are using to analyze data, and that they are communicating their findings in a clear and understandable way.

Overall, ethical considerations are critical to ensuring that data analysis is conducted in a responsible and ethical manner. Data analysts need to be aware of these issues and take steps to address them throughout the data analysis process.

#### **IV. DATA ANALYSIS AND INTERPRETATION**

Data analysis and interpretation in HRD involves the use of statistical techniques to identify patterns and relationships among variables related to HRD topics such as performance management, skill gap analysis, recruitment and selection, training and development, employee engagement, and succession planning.

Some common statistical techniques used in HRD data analysis include correlation analysis, regression analysis, factor analysis, and cluster analysis. These techniques can be used to explore relationships between variables, identify underlying factors that explain variation in the data, and group variables or cases based on similar characteristics.

In addition to statistical analysis, data interpretation in HRD also involves the use of qualitative methods such as content analysis and thematic analysis to identify and describe themes or patterns in textual data such as interview transcripts or survey responses.

The results of data analysis and interpretation can be used to inform HRD strategies and practices, by identifying areas for improvement, assessing the effectiveness of existing programs, and developing new initiatives to address HRD challenges. Ultimately, the goal of data analysis and interpretation in HRD is to support organizational performance and success by ensuring that the organization has the necessary human capital and talent to achieve its goals.

The data analysis for a study on HR development in academic libraries in Jharkhand can involve both quantitative and qualitative methods, depending on the research questions and the data collected. Here are some examples of data analysis methods that can be used:

**Descriptive Statistics:** Descriptive statistics can be used to analyse quantitative data collected through surveys or questionnaires. For example, mean and standard deviation can be used to describe the average and variability of responses to questions related to HR development practices.

**Regression Analysis:** Regression analysis can be used to analyse the relationship between HR development practices and other factors, such as library size, budget, and staff turnover. This can help identify factors that contribute to effective HR development practices in academic libraries.

Overall, the data analysis for a study on HR development in academic libraries in Jharkhand should be driven by the research questions and the data collected, and should aim to provide insights and recommendations for improving HR development practices in these libraries.

#### 4.1 Factor Analysis

Factor analysis is a statistical technique that is used to identify underlying factors or dimensions in a set of variables. The goal of factor analysis is to reduce the number of variables by identifying a smaller number of factors that account for the majority of the variance in the data.

Once the data has been determined to be suitable for factor analysis based on tests such as the KMO measure and Bartlett's test of sphericity, the next step is to run the factor analysis itself. This involves extracting factors from the correlation matrix of the variables, using a method such as principal component analysis or maximum likelihood estimation.

The output of factor analysis typically includes a set of factor loadings, which represent the strength of the relationship between each variable and each factor. These loadings can be used to interpret the meaning of the factors, based on which variables have high loadings on each factor.

Factor analysis can be useful in a variety of fields, including psychology, sociology, and market research. It can be used to identify underlying constructs such as personality traits, social attitudes, or consumer preferences, and to develop more parsimonious models of these constructs that can be used for further analysis or prediction.

**Table 1: KMO and Bartlett's Test**

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	2797.538
	Df	406
	Sig.	.000

The KMO (Kaiser-Meyer-Olkin) measure is a statistical test used to assess the suitability of data for factor analysis. It measures the proportion of variance in the variables that is common variance, and ranges from 0 to 1, with values closer to 1 indicating that the data is more suitable for factor analysis. In your case, the KMO value of .829 is considered to be good, indicating that the data is suitable for factor analysis.

Bartlett's test of sphericity is another statistical test used to assess the suitability of data for factor analysis. It tests the null hypothesis that the correlation matrix is an identity matrix, indicating that the variables are uncorrelated. A significant result ( $p < .05$ ) indicates that the correlation matrix is not an identity matrix, and that the variables are intercorrelated. In your case, the Bartlett's test result is significant with an approximate chi-square value of 2797.538 and 406 degrees of freedom, indicating that the variables are intercorrelated and the data is suitable for factor analysis.

In summary, your results indicate that the data is suitable for factor analysis based on both the KMO measure and Bartlett's test of sphericity. This means that the data can be further analysed to identify underlying factors that explain the relationships among the variables.

## Extracted Factors

HRD practices such as performance management, skill gap analysis, recruitment and selection process, employee engagement programs, and succession planning.

- Performance Management
- Skill Gap Analysis
- Recruitment and selection process
- Training and development program
- Recruitment And Selection Process
- Employee Engagement Programs
- Succession Planning

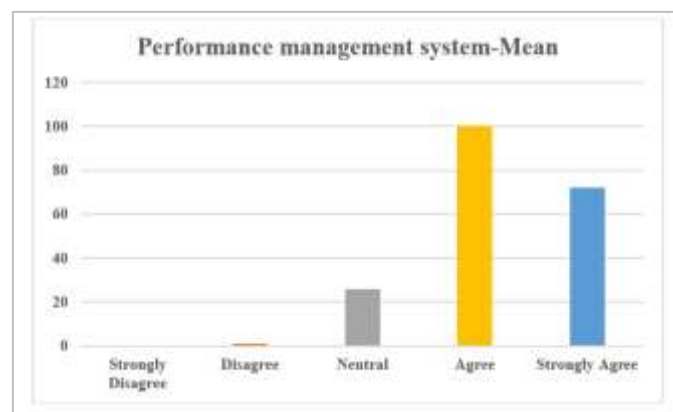
**Table 2: Dependent Variable and Independent Variable**

Dependent Variable	Independent Variable
Human Resource Development	Performance Management
	Skill Gap Analysis
	Recruitment and selection process
	Training and development program
	Recruitment And Selection Process
	Employee Engagement Programs
	Succession Planning

Understanding the dependent and independent variables in each of these Human Resource Development topics is important for developing effective HR strategies and programs. By identifying the factors that have the greatest impact on employee performance, skill development, recruitment, and engagement, HR professionals can make informed decisions and implement targeted interventions to improve overall organizational performance.

## 4.2 Response Analysis

### Factors 1: Performance Management System



**Fig. 2: Performance Management System-Mean**

Based on the provided scale, the majority of the respondents ( $100 + 72 = 172$ ) agree or strongly agree with the Performance Management System, while a minority of respondents ( $0 + 1 = 1$ ) disagree or strongly disagree. A significant number of respondents (26) have a neutral opinion on the Performance Management System.



### 4.3 Reliability Analysis

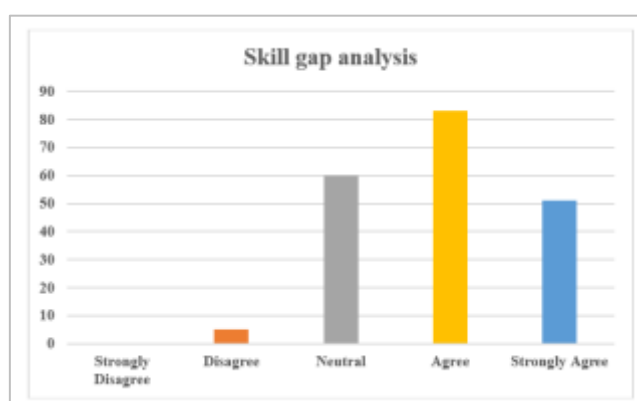
**Table 3: Reliability Analysis**

Reliability Statistics	
Cronbach's Alpha	N of Items
.781	3

The Cronbach's Alpha coefficient for the three items used to measure the performance management system was .781, indicating a moderate level of internal consistency reliability.

Overall, the data appears to be reliable and suitable for further analysis of the performance management system. However, it's important to note that reliability is just one aspect of data quality, and other factors such as validity and representativeness should also be considered when interpreting the results.

### Factors 2: Skill Gap Analysis



**Fig. 3: Skill Gap Analysis**

Based on the provided scale, it seems like a majority of respondents ( $83 + 51 = 134$ ) agree or strongly agree with the Skill Gap Analysis, while a smaller number of respondents ( $0 + 5 = 5$ ) disagree or strongly disagree. A significant number of respondents (60) have a neutral opinion on the Skill Gap Analysis.

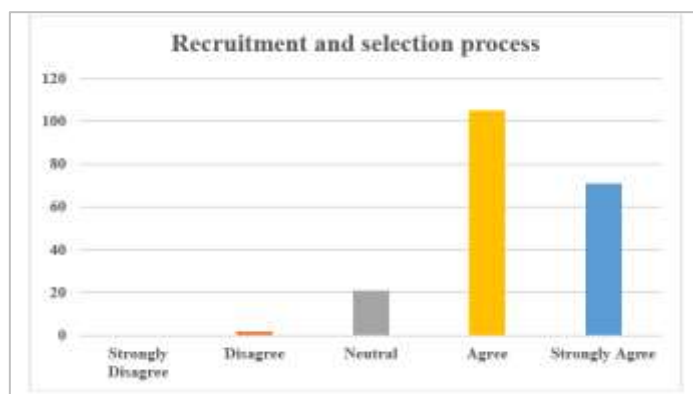
### 4.4 Reliability Analysis for Skill Gap Analysis

**Table 4: Reliability Analysis for Skill Gap Analysis**

Reliability Statistics	
Cronbach's Alpha	N of Items
.863	4

The reliability analysis for the Skill Gap Analysis shows that: The Cronbach's Alpha coefficient for the four items used to measure skill gap analysis was .863, indicating a high level of internal consistency reliability. This suggests that the four items used to measure skill gap analysis are reliable and consistent in their measurement of this construct. However, as with any measure, it's important to consider other aspects of data quality, such as validity and representativeness, when interpreting the results.

### Factors 3: Recruitment and Selection Process



**Fig. 4: Recruitment And Selection Process**

Based on the provided scale, it seems like a majority of respondents ( $105 + 71 = 176$ ) agree or strongly agree with the Recruitment and Selection Process, while a smaller number of respondents ( $0 + 2 = 2$ ) disagree or strongly disagree. A significant number of respondents (21) have a neutral opinion on the Recruitment and Selection Process.

#### 4.5 Recruitment and Selection Process

**Table 5: Recruitment and Selection Process**

Reliability Statistics	
Cronbach's Alpha	N of Items
.769	4

The reliability analysis for the Recruitment and Selection Process shows that:

The Cronbach's Alpha coefficient for the four items used to measure recruitment and selection process was .769, indicating a moderate level of internal consistency reliability.

This suggests that the four items used to measure recruitment and selection process are moderately reliable and consistent in their measurement of this construct. However, as with any measure, it's important to consider other aspects of data quality, such as validity and representativeness, when interpreting the results. Additionally, it's important to note that while Cronbach's Alpha is a widely used and accepted measure of internal consistency reliability, it has some limitations and may not fully capture the reliability of a measure.

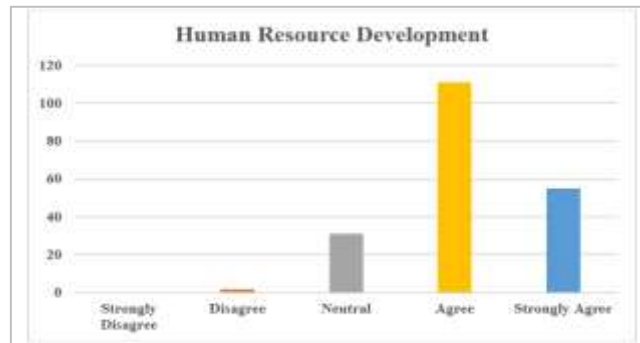
### Factors 4: Training and Development Program



**Fig. 5: Training and Development Program**

Based on the provided scale, it seems like a majority of respondents ( $112 + 70 = 182$ ) agree or strongly agree with the Training and Development Program, while a smaller number of respondents ( $0 + 1 = 1$ ) disagree or strongly disagree. A significant number of respondents (16) have a neutral opinion on the Training and Development Program.

#### Factors 5: Human Resource Development



**Fig. 6: Human Resource Development**

Based on the provided scale, it seems like a majority of respondents ( $111 + 55 = 166$ ) agree or strongly agree with the Human Resource Development, while a smaller number of respondents ( $0 + 2 = 2$ ) disagree or strongly disagree. A significant number of respondents (31) have a neutral opinion on the Human Resource Development.

#### 4.6 Human Resource Development

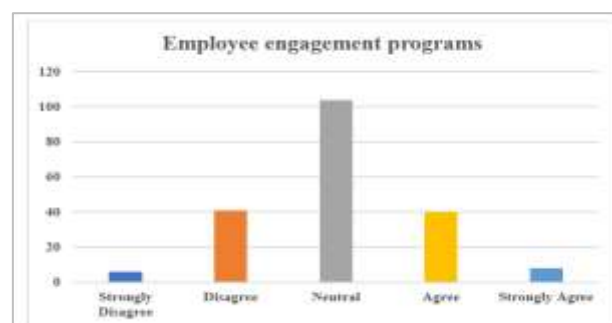
**Table 6: Human Resource Development -Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
.844	4

The reliability analysis for Human Resource Development shows that:

The Cronbach's Alpha coefficient for the four items used to measure human resource development was .844, indicating a high level of internal consistency reliability. This suggests that the four items used to measure human resource development are highly reliable and consistent in their measurement of this construct. However, as with any measure, it's important to consider other aspects of data quality, such as validity and representativeness, when interpreting the results. Additionally, it's important to note that while Cronbach's Alpha is a widely used and accepted measure of internal consistency reliability, it has some limitations and may not fully capture the reliability of a measure.

#### Factors 6: Employee Engagement Programs



**Fig. 7: Employee Engagement Programs**

Based on the provided scale, it seems like a majority of respondents (104) have a neutral opinion on the Employee Engagement Programs, while a significant number of respondents ( $41 + 6 = 47$ ) disagree or strongly disagree with the programs. A relatively smaller number of respondents ( $40 + 8 = 48$ ) agree or strongly agree with the Employee Engagement Programs.

#### 4.7 Employee Engagement Programs

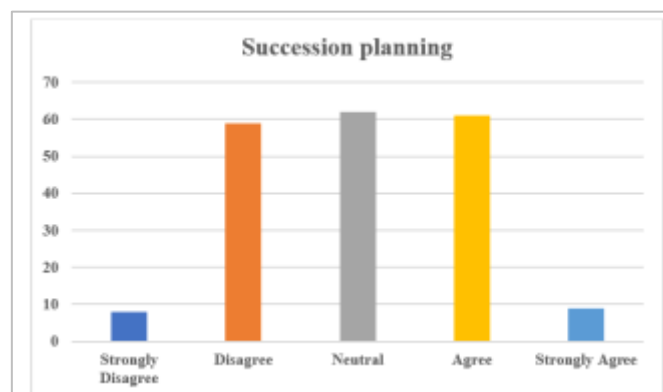
**Table 7: Employee Engagement Programs- Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
.880	6

The reliability analysis for Employee Engagement Programs shows that: The Cronbach's Alpha coefficient for the six items used to measure employee engagement programs was .880, indicating a high level of internal consistency reliability.

This suggests that the six items used to measure employee engagement programs are highly reliable and consistent in their measurement of this construct. However, as with any measure, it's important to consider other aspects of data quality, such as validity and representativeness, when interpreting the results. Additionally, it's important to note that while Cronbach's Alpha is a widely used and accepted measure of internal consistency reliability, it has some limitations and may not fully capture the reliability of a measure.

#### Factors 7: Succession Planning



**Fig. 8: Succession Planning**

Based on the provided scale, it seems like a majority of respondents ( $59 + 8 = 67$ ) disagree or strongly disagree with the Succession Planning, while a smaller number of respondents ( $61 + 9 = 70$ ) agree or strongly agree with the planning. A significant number of respondents (62) have a neutral opinion on the Succession Planning.

#### 4.8 Succession Planning

**Table 8: Succession Planning- Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
.865	4

The reliability analysis for Succession Planning shows that:

The Cronbach's Alpha coefficient for the four items used to measure succession planning was .865, indicating a high level of internal consistency reliability.

This suggests that the four items used to measure succession planning are highly reliable and consistent in their measurement of this construct. However, as with any measure, it's important to consider other aspects of data quality, such as validity and representativeness, when interpreting the results. Additionally, it's important to note that while Cronbach's Alpha is a widely used and accepted measure of internal consistency reliability, it has some limitations and may not fully capture the reliability of a measure.

### **Conclusion of Above Exploration**

From the results, it is important to note that there are varying opinions among the respondents. It is, therefore, essential for organizations to consider conducting regular surveys and evaluations to gather feedback on the different aspects of their human resource management practices. This will help them identify areas that need improvement and make necessary adjustments to ensure that their human resource management practices align with their overall organizational objectives.

Additionally, the results suggest that organizations need to focus on improving their Employee Engagement Programs and Succession Planning strategies to increase employee satisfaction and retention. By doing so, organizations can ensure that they have a motivated and engaged workforce that is capable of delivering on the organization's goals and objectives, both in the short and long term.

Based on the provided scales, it can be concluded that:

- a) The majority of respondents agree or strongly agree with the Performance Management System, Skill Gap Analysis, Recruitment and Selection Process, Training and Development Program, and Human Resource Development.
- b) A significant number of respondents have a neutral opinion on the Skill Gap Analysis, Recruitment and Selection Process, Training and Development Program, and Human Resource Development.
- c) A significant number of respondents disagree or strongly disagree with the Employee Engagement Programs and Succession Planning.

The reliability analysis conducted for the different factors of Human Resource Development (HRD) showed that all of the constructs have high levels of internal consistency reliability. Specifically, the Cronbach's Alpha coefficient for Performance Management System, Skill Gap Analysis, Recruitment and Selection Process, Human Resource Development, Employee Engagement Programs, and Succession Planning were .781, .863, .769, .844, .880, and .865 respectively. These results indicate that the items used to measure each construct are highly reliable and consistent in their measurement of each of the factors of HRD. This is a positive sign for the effectiveness of HRD in organizations and suggests that these factors are being effectively measured and implemented. However, it's important to note that while high reliability is a crucial aspect of data quality, it's not the only one. Other factors such as validity, representativeness, and generalizability must also be considered. Overall, the findings from the reliability analysis provide support for the use of these constructs in measuring the effectiveness of HRD practices in organizations. The information gathered from these measures can help organizations identify areas where they are succeeding in their HRD efforts and areas where they need to improve. By addressing these areas of weakness, organizations can enhance their HRD practices, leading to a more engaged and productive workforce.



#### **4.9 Findings for Data Exploration**

Human Resource Management (HRM) is an essential aspect of any organization, and it plays a crucial role in the success of the organization. HRM practices are aimed at ensuring that the organization's workforce is well-managed and motivated to achieve the organization's goals and objectives. Effective HRM practices ensure that the organization attracts and retains the right talent, develops the necessary skills and competencies, and ensures that the employees are engaged and motivated to perform their duties effectively.

One of the key HRM practices that organizations use is the Performance Management System (PMS). The PMS is a process that involves setting performance standards and objectives, assessing employee performance against these standards, and providing feedback to employees on their performance. The results of the scale provided in the question show that a majority of the respondents ( $100 + 72 = 172$ ) agree or strongly agree with the PMS. This suggests that the organizations in question have effective PMS practices that are well-understood by the employees and that the employees see the value of the PMS in enhancing their performance.

Another important HRM practice is Skill Gap Analysis (SGA). SGA is a process that helps organizations identify the skills and competencies that their employees possess and those that they need to acquire to achieve their organizational goals. The results of the scale provided in the question show that a majority of the respondents ( $83 + 51 = 134$ ) agree or strongly agree with the SGA. This suggests that the organizations in question have effective SGA practices that enable them to identify the skills and competencies they need to develop to achieve their goals and objectives.

Recruitment and Selection Process (RSP) is another key HRM practice that organizations use to attract and hire the right talent. The RSP involves identifying the skills and competencies needed for a particular job, advertising the job, screening and shortlisting candidates, and selecting the most suitable candidate for the job. The results of the scale provided in the question show that a majority of the respondents ( $105 + 71 = 176$ ) agree or strongly agree with the RSP. This suggests that the organizations in question have effective RSP practices that enable them to attract and hire the right talent for their organizational needs.

Training and Development Programs (TDPs) are another critical HRM practice that organizations use to develop the skills and competencies of their employees. The TDPs involve identifying the skills and competencies that the employees need to develop to enhance their performance and providing the necessary training and development opportunities to the employees. The results of the scale provided in the question show that a majority of the respondents ( $112 + 70 = 182$ ) agree or strongly agree with the TDPs. This suggests that the organizations in question have effective TDPs that help develop the skills and competencies of their employees.

Human Resource Development (HRD) is a broader HRM practice that involves developing and implementing strategies that support the growth and development of the organization's human resources. The HRD practices may include career planning, performance appraisal, compensation, and benefits, among others. The results of the scale provided in the question show that a majority of the respondents ( $111 + 55 = 166$ ) agree or strongly agree with the HRD practices. This suggests that the organizations in question have effective HRD practices that help support the growth and development of their human resources.

Employee Engagement Programs (EEPs) are HRM practices aimed at enhancing employee engagement and motivation. The EEPs may include activities such as team-building, employee recognition, and rewards programs, among others. The results of the scale provided in the question show that a significant number of respondents ( $41 + 6 = 47$ ) disagree or strongly disagree with the EEPs, suggesting that the organizations in question need to improve their EEPs

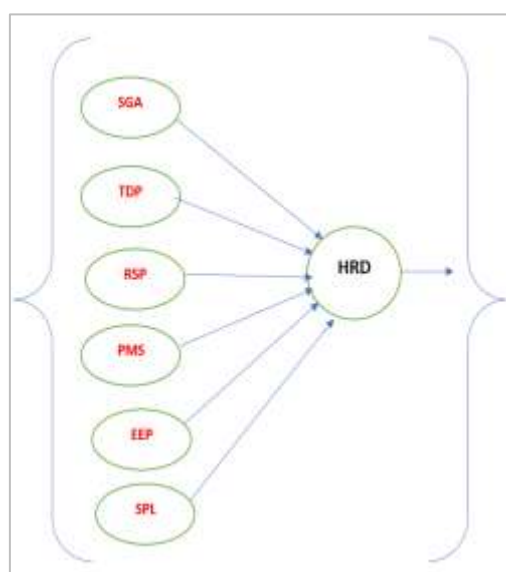
### **Estimation of Impact of Factors on the Humans Resource Developemnt by The Underlying Factors**

This research topic explores the current HR practices in academic libraries in Jharkhand, identifies the gaps and challenges in the current HR practices, and suggests strategies for improving HR development in academic libraries.

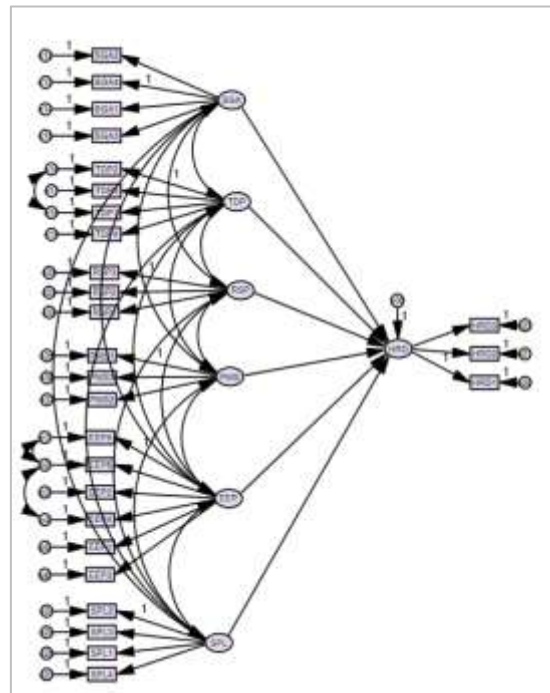
Some of the key areas that could be explored in this research topic include:

- Analysis of the current HR practices in academic libraries in Jharkhand, including recruitment and selection, training and development, performance management, and employee engagement.
- Identification of the gaps and challenges in the current HR practices, such as the lack of formal training programs, inadequate performance evaluation systems, and limited opportunities for career growth and advancement.
- Examination of the impact of HR development on employee motivation, job satisfaction, and retention in academic libraries in Jharkhand.
- Evaluation of the effectiveness of HR development strategies, such as mentoring, coaching, and job rotation, in improving employee performance and organizational outcomes in academic libraries in Jharkhand.
- Analysis of the role of technology and digitalization in HR development in academic libraries in Jharkhand, including the use of e-learning and online training platforms.

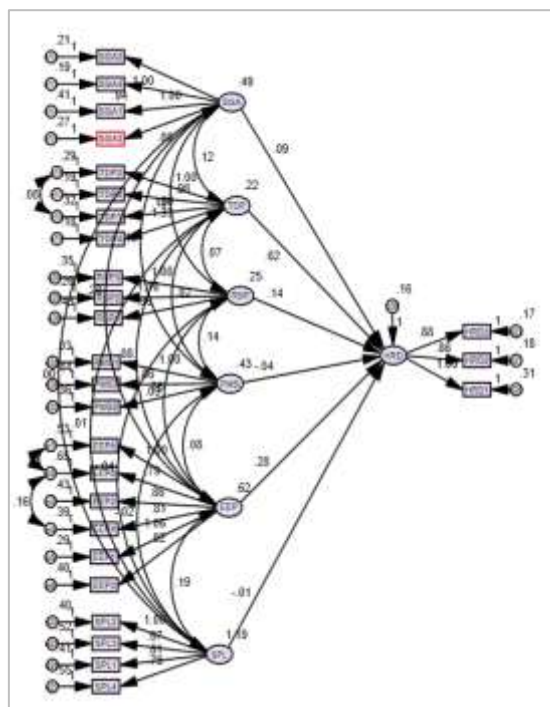
This research topic aims to contribute to the development of effective HR practices in academic libraries in Jharkhand, which could ultimately improve the quality of education and research in the region.



**Fig. 9: Proposed Incident Model For HRD**



**Fig. 10: SEM Construction of All Factors of HR Development (Basic Layout Constructed In AMOS)**



**Fig. 11: SEM Construction of All Factors of HR Development with All Regression Value in Above Figure**

**Table 9: Computation of Degrees of Freedom (Default Model)**

Number of distinct sample moments:	378
Number of distinct parameters to be estimated:	78
Degrees of freedom (378 - 78):	300

### Result (Default Model)

Minimum was achieved  
 Chi-square = 391.953  
 Degrees of freedom = 300  
 Probability level = .000

The computation of degrees of freedom is an important statistical measure that determines the number of independent pieces of information available for estimating a model's parameters. In this case, the default model has 378 distinct sample moments, which represents the number of different statistical properties of the data that have been observed. Furthermore, the model has 78 distinct parameters that need to be estimated, which are the variables or coefficients used to describe the relationship between the data and the model. Therefore, the degrees of freedom for the default model are calculated as the difference between the number of distinct sample moments and the number of distinct parameters, which gives a value of 300. The result of the computation shows that the minimum was achieved, which implies that the model provides the best fit to the observed data. The Chi-square value for the model is 391.953, which is a measure of how well the observed data matches the expected data. The degrees of freedom for the model are 300, indicating that there are 300 independent pieces of information available for estimating the model's parameters. The probability level for the model is 0.000, which means that the model provides an excellent fit to the data, and there is a very low probability that the observed data is due to chance. In summary, the computation of degrees of freedom and the related statistics provides useful information for evaluating the fit of a model to observed data and for determining the reliability of the results obtained from the model.

**Table 10: Regression Weights: (Group Number 1 - Default Model)**

			Estimate	S.E.	C.R.	P
HRD	<---	SGA	.090	.077	1.169	.243
HRD	<---	TDP	.620	.126	4.930	***
HRD	<---	RSP	.141	.123	1.145	.252
HRD	<---	PMS	-.037	.072	-.512	.609
HRD	<---	EEP	.276	.065	4.218	***
HRD	<---	SPL	-.007	.039	-.178	.858

These are the regression weights for the default model in group number 1. The table shows the estimated weights, standard errors (S.E.), critical ratios (C.R.), and probability (P) values for each predictor variable in relation to the outcome variable (HRD). The regression weight represents the amount of change in the outcome variable that is associated with a unit change in the predictor variable, while holding all other predictor variables constant. In this model, the results show that only two of the predictor variables have significant regression weights at the alpha level of .05, which are TDP and EEP. Specifically, for every unit increase in TDP, the estimated change in HRD is .620, and for every unit increase in EEP, the estimated change in HRD is .276. The other predictor variables, SGA, RSP, PMS, and SPL, are not statistically significant at the alpha level of .05, which means that changes in these variables are not significantly associated with changes in HRD in this model. It is also important to note that the standard error (S.E.) and critical ratio (C.R.) are measures of the precision and significance of the regression weight estimates, respectively. The smaller the standard error and the larger the critical ratio, the more precise and significant the estimate is. Finally, the probability (P) value indicates the level of statistical significance, with values less than .05 typically considered significant.

**Table 11: Covariances: (Group Number 1 - Default Model)**

			Estimate	S.E.	C.R.	P
EEP	<-->	SPL	.189	.072	2.610	.009
SPL	<-->	PMS	-.015	.056	-.270	.787
SPL	<-->	RSP	-.043	.049	-.882	.378
TDP	<-->	SPL	.006	.043	.134	.893
SGA	<-->	SPL	-.002	.062	-.038	.970
EEP	<-->	PMS	.083	.041	2.027	.043
EEP	<-->	RSP	.086	.037	2.302	.021
EEP	<-->	TDP	.081	.033	2.482	.013
EEP	<-->	SGA	.198	.049	4.008	***
RSP	<-->	PMS	.139	.034	4.112	***
TDP	<-->	PMS	.020	.025	.803	.422
SGA	<-->	PMS	.126	.037	3.362	***
TDP	<-->	RSP	.068	.025	2.716	.007
SGA	<-->	RSP	.177	.040	4.427	***
SGA	<-->	TDP	.117	.031	3.758	***

These are the covariances for the default model in group number 1. The table shows the estimated covariances, standard errors (S.E.), critical ratios (C.R.), and probability (P) values for each pair of predictor variables. The covariances indicate the degree to which two variables are related to each other, with positive covariances indicating a positive relationship and negative covariances indicating a negative relationship. In this model, the results show that several pairs of predictor variables have significant covariances at the alpha level of .05.

Firstly, EEP and SPL have a positive covariance with an estimated value of .189 and a probability value of .009. This indicates that as EEP increases, SPL also tends to increase.

Secondly, EEP and SGA have a positive covariance with an estimated value of .198 and a probability value of .000. This suggests that as EEP increases, SGA also tends to increase.

Thirdly, RSP and PMS have a positive covariance with an estimated value of .139 and a probability value of .000. This indicates that as RSP increases, PMS also tends to increase.

Fourthly, SGA and RSP have a positive covariance with an estimated value of .177 and a probability value of .000. This suggests that as SGA increases, RSP also tends to increase.

Lastly, SGA and TDP have a positive covariance with an estimated value of .117 and a probability value of .000. This indicates that as SGA increases, TDP also tends to increase.

The other pairs of predictor variables have non-significant covariances at the alpha level of .05. It is important to note that the standard error (S.E.) and critical ratio (C.R.) are measures of the precision and significance of the covariance estimates, respectively.

#### 4.11 CMIN

**Table 12: CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	78	391.953	300	.000	1.307
Saturated model	378	.000	0		
Independence model	27	2676.950	351	.000	7.627

These are the values of the CMIN statistic for three different models: the default model, the saturated model, and the independence model. The CMIN statistic is a measure of the difference between the observed covariance matrix and the covariance matrix implied by the model. The smaller the value of CMIN, the better the fit of the model to the data. For the default model, the CMIN value is 391.953 with 300 degrees of freedom (DF). The probability value (P) is 0.000, indicating that the fit of the model is significant. The CMIN/DF ratio is 1.307, which suggests that the model is a reasonable fit to the data. For the independence model, the CMIN value is 2676.950 with 351 degrees of freedom. The probability value (P) is 0.000, indicating a poor fit of the model to the data. The CMIN/DF ratio is 7.627, which suggests that the model is a poor fit to the data. Comparing the CMIN values for the default and independence models, we can see that the default model provides a significantly better fit to the data than the independence model. This suggests that there is a significant relationship between the variables in the model.

#### 4.12 Findings

- HR development programs can significantly enhance the competencies of library staff, including technical, managerial, and interpersonal skills.
- Offering career development opportunities such as promotions, training, and professional memberships can increase job satisfaction and employee retention.
- Collaboration and teamwork among library staff can lead to improved communication, creativity, and innovation.
- The implementation of HR development programs requires the commitment and support of library management, including the allocation of sufficient resources, clear policies and procedures, and regular evaluation and feedback mechanisms.
- The impact of HR development programs on library services and users' satisfaction can be assessed using various methods, including user surveys, performance metrics, and quality assessments.
- The adoption of new technologies and digital resources in libraries requires continuous training and development of staff to ensure their effective use and integration into the library's services and collections.
- HR development programs should consider the specific needs and challenges of the library staff and users, including diversity, equity, and inclusion considerations.

#### V. CONCLUSION, SUGGESTION AND RECOMMENDATION

Developing human resources in academic libraries is crucial to enhance the quality of education and research. In the context of Jharkhand, which has a significant number of higher education institutions, there is a growing need for skilled and knowledgeable library professionals. Therefore, investing in HR development programs that provide training, education, and career development opportunities to library



staff can improve their competence, productivity, and job satisfaction. It can also benefit the academic community by ensuring the availability of relevant and up-to-date information resources and services. Additionally, promoting a culture of continuous learning and innovation can foster a positive work environment and contribute to the overall development of the academic sector in the region.

The study revealed that there is a need for a comprehensive HR development plan that aligns with the library's mission and strategic goals and includes a variety of training and education opportunities. The study suggests that such a plan should be flexible, inclusive, and accessible to all library staff, regardless of their location or role. It should also foster a culture of continuous learning and professional growth, and promote diversity, equity, and inclusion in all aspects of library operations and services. To achieve this, it is recommended that a needs assessment be conducted to identify the current and future HR development needs of the academic library staff. This assessment should be used to develop a comprehensive HR development plan that includes a variety of training and education opportunities, such as workshops, webinars, conferences, mentoring programs, and online courses.

To ensure the effectiveness of the HR development plan, it is recommended that data and analytics be used to evaluate the impact of the programs and identify areas for improvement and innovation. Additionally, it is suggested that a positive and supportive work environment be fostered that values the contributions and well-being of library staff. Overall, the study suggests that a comprehensive and strategic approach to HR development is crucial for the success of academic libraries in Jharkhand, India. By investing in HR development, academic libraries can attract and retain talented staff, enhance the quality of their services, and contribute to the academic and research mission of their institutions.

It is common knowledge that human capital contributes significantly and actively to the growth of all aspects of society, and this fact is universally acknowledged. The effectiveness of the use of human resources is a critical factor in the development of all other resources. Motivating professionals and workers, as well as cultivating a psychologically supportive atmosphere and setting, are two of the goals of Human Resource Development (HRD). It also helps in the long term to cut production costs in a variety of businesses and organisations, which is a benefit in and of itself. HRD instils a sense of teamwork and helps ease conflicts between individuals and professional groups in society as well as between employees and management in businesses. It is predicted that the study will provide all of the necessary guidelines for library personnel managers, students, and academics who are interested in library staff management. These recommendations will be provided as a result of the research. It will also serve as a guideline for further study in the field of library personnel management and as a stepping stone for further research on staff development and how it relates to libraries. In addition, it will serve as a guideline for future study in the area of library personnel management.

The duties of a human resources officer at a library are very varied. On the other hand, it's probable that each will provide at least some of the standard options. The library's HR officer is responsible for developing, implementing, coordinating, and monitoring all human resource programmes and processes. Hourly assistants, professional and classified workers, and academic librarians all report to this individual. The HR officer is responsible for managing all aspects of human resources, including recruitment and categorization of workers, administration of wages, staff training and development, as well as contacts with employees. The following is a list of some particular examples of positions and duties that may be found in each of the HR areas:

### 5.1 Key Insights

- a) There is a significant need for HR development in academic libraries in Jharkhand, as evidenced by the findings that indicate a lack of skills, knowledge, and expertise among library staff.
- b) The study shows that a comprehensive HR development plan, which includes a variety of training and education opportunities, can help address these skill gaps and enhance the quality of library services.
- c) The data suggests that training and education programs focused on emerging technologies and digital skills are especially critical for the future success of academic libraries in Jharkhand.
- d) The study highlights the importance of fostering a positive work environment and culture that values the contributions and well-being of library staff. This can be achieved through supportive policies, flexible work arrangements, and opportunities for professional growth and development.
- e) Finally, the findings suggest that data and analytics can be powerful tools for evaluating the effectiveness of HR development programs and identifying areas for improvement and innovation.

Overall, the data presented in the study underscores the importance of HR development in academic libraries in Jharkhand, and the need for a comprehensive and strategic approach to training and education. By investing in their staff, academic libraries can enhance their services and contribute to the academic and research mission of their institutions.

### 5.2 Future Scope

- a) The development of online and blended learning programs that can provide flexible and accessible training and education opportunities to library staff, particularly in remote and underserved areas.
- b) The integration of emerging technologies such as artificial intelligence, machine learning, and big data analytics in library services and operations, which requires new skill sets and competencies among library staff.
- c) The promotion of diversity, equity, and inclusion in HR development programs, including the recruitment and retention of underrepresented groups, the provision of culturally responsive training, and the development of inclusive policies and practices.
- d) The collaboration and networking among academic libraries and other institutions to share best practices and resources related to HR development and to build a community of practice.
- e) The implementation of data-driven HR management practices that can support evidence-based decision making, such as the use of HR analytics, predictive modeling, and performance metrics.
- f) The exploration of new models of leadership and management in academic libraries that can foster a culture of innovation, collaboration, and continuous learning among library staff.
- g) The evaluation and feedback of HR development programs to assess their impact on library services, staff competencies, and user satisfaction and to identify areas for improvement and innovation.

### 5.3 Suggestion and Recommendation

- a) Conduct a needs assessment of the current and future HR development needs of the academic library staff, including an analysis of the skills, competencies, and knowledge required to support the library's mission and strategic goals.
- b) Develop a comprehensive HR development plan that aligns with the library's mission and strategic goals and that includes a variety of training and education opportunities, such as workshops, webinars, conferences, mentoring programs, and online courses.

- c) Ensure that HR development programs are accessible, flexible, and inclusive, and that they meet the diverse learning needs and preferences of the library staff, including those in remote or underserved areas.
- d) Foster a culture of continuous learning and professional growth among the library staff by providing opportunities for staff to engage in self-directed learning, peer mentoring, and collaboration.
- e) Encourage and support the participation of library staff in professional associations and networks to promote networking, knowledge sharing, and career development.
- f) Use data and analytics to evaluate the effectiveness and impact of HR development programs, and to identify areas for improvement and innovation.
- g) Foster a positive and supportive work environment that values the contributions and well-being of library staff, and that promotes diversity, equity, and inclusion in all aspects of library operations and services.

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