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Research Article

Human Resource Management Functions in Optimizing Logistics Services at Saudi Universities: Challenges and Opportunities

Omar A. Baakeel
University of Jeddah, College of Business at Alkamil, Department of Human Resources Management, Jeddah, Saudi Arabia
obaakeel@uj.edu.sa

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ABSTRACT

Enhancing logistics in service organizations plays a major role in the overall functioning of universities in terms of consumer satisfaction levels, the cost of delivering services, and the effectiveness of the university. Logistics challenges arising from the demand for academic services and infrastructure growth are well handled through human resources management (HRM) functions in Saudi universities. This study analyzes the role of HRM functions in improving logistics services, with an emphasis on the prospects and issues linked to Saudi Vision 2030. Various HRM functions such as recruitment, training, and workforce planning have been discussed as solutions to logistics challenges. Consequently, this study provides specific guidance for Saudi universities on how to rebalance their current HRM requirements in line with new development tendencies within the framework of the logistics operating environment, thus enhancing the academic community's overall adaptability and resilience.

Keywords: Logistics services, human resource management, university, training, workforce planning, recruitment.

Introduction

Logistics organizations significantly influence the efficacy of instructional, research, and administrative operations at Saudi universities (Mahdaly & Adeinat, 2022). These services are pertinent to daily operations on campuses and are essential for fulfilling the overall educational mission. Logistics include transit networks for students and staff, housing facilities, necessary supply chains, and learning technologies for online and mixed settings (Salinas-Navarro et al., 2024). These logistical tasks extend to not only the provision of education, but also the experiences of students and their families while on campus.

With increasing enrollment in universities and other institutions of higher learning across the Kingdom of Saudi Arabia, universities are increasing in size and technological innovation (Ahmed et al., 2023). Human resources management (HRM) functions can be implemented in these logistics functions to act as a crucial strategic platform through which service optimization can be attained. Good objectives and necessary planning are the basis for solving organizational and logistical challenges in the organization of work in universities (Watson et al., 2021). For instance, specialized professionals in the transportation, information technology (IT), and facility management sectors may be required. These skilled professionals can help address challenges such as optimizing resource allocation, improving distributing resources, and integrating new technologies into campus life (Akour & Alenezi, 2022).

Workforce planning is an additional HRM function that can improve logistics services. University logistics departments must address human supply and demand considerations while enhancing organizations' digital services and facilities (Gupta et al., 2022; Vij et al., 2023). Education, training, and ongoing professional development are significant facilitators of logistics (McAuliffe & Gledhill, 2022). Logistics circumstances continually evolve with technological advancements and increasing work complexity. Thus, university staff must embrace emerging trends and tools. Effective loss and damage control, consistent maintenance of digital assets, and training programs in

supply chain management and customer service can improve staff proficiency in providing services to students, thereby enhancing the quality of logistics services (Kendzierskyj et al., 2023).

By aligning these HRM functions with Saudi Vision 2030, universities can contribute to achieving the country's goals of expanding educational opportunities, promoting innovation, and becoming strong competitors in the international educational market. All goals stated under the Vision 2030 agenda, such as sustainable development, human capital enhancement, and technological development, can best be realized through the adoption of HRM functions.

Research Objectives

1. To explore the challenges faced by HR departments in enhancing logistics services, including training, recruitment, and workforce planning.

2. To identify opportunities for improving HRM functions to support the logistics services optimization goals of Saudi universities.

3. To recommend strategies and frameworks for addressing challenges and leveraging opportunities in HRM for logistics optimization.

Research Questions

1. What are the key challenges faced by HR departments in enhancing logistics services?

2. What opportunities does HRM have to improve the quality and efficiency of logistics services in Saudi universities?

3. What practical strategies can be proposed to address the identified challenges and opportunities in HRM for logistics services?

Scope and Significance

This study offers practical advantages by disseminating significant results that can assist HR practitioners and university executives in implementing effective HRM processes to enhance logistics operations. The results support the formulation of policies through strategic guidelines to align logistics services with the aims of Saudi universities. Research aimed at assessing obstacles and possibilities enhances resource utilization, facilitates improved allocation of human labor and logistics assets, and promotes more efficient resource management and successful service delivery. This study contributes to academia by broadening inquiries into HRM and logistics techniques for Saudi Arabian higher education institutions. This study aligns with Saudi Arabia's Vision 2030 by focusing on university workforce development and operational efficiency, helping to strengthen both the educational system and national economic objectives.

Literature Review

Current HRM Functions in Logistics Services at Saudi Universities

HRM functions and logistics services are essential for the effective operation of Saudi Arabian institutions. The Vision 2030 project has prompted substantial changes in the higher education system, focusing on improving educational quality, infrastructure, and operational efficiency (Zhang, 2023). Universities prioritize the recruitment of exceptionally talented academic and administrative personnel via worldwide searches and national talent development initiatives in accordance with the Saudization strategy (Zhang & Chen, 2024). Professional development is fundamental to HRM at Saudi universities, providing ongoing training to ensure that staff remain informed about global trends and are equipped for leadership positions (Yameen et al., 2021). Moreover, universities are dedicated to encouraging diversity and inclusion and establishing settings that assist women, foreign professors, and those with impairments while advancing gender equality in leadership positions (Watson et al., 2021).

Universities invest in maintaining and upgrading facilities to meet the needs of their communities and adopt smart campus technologies to enhance resource efficiency (Wasti et al., 2023). Transportation logistics include shuttle services and parking management, with some universities exploring sustainable transport options, such as electric buses to reduce the environmental impact (Vahdat, 2022). Event management involves coordinating academic

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conferences and extracurricular activities and requires meticulous planning and resource allocation (Stalmachova et al., 2021). Despite challenges, such as integrating technology, retaining staff, and balancing resource allocation, opportunities exist in digital transformation, industry collaboration, and sustainability. By leveraging these opportunities, Saudi universities can enhance their HRM and logistics strategies and foster an environment that supports academic excellence and operational efficiency (Simpson et al., 2021).

Global HRM Challenges in University Logistics Services

As higher education institutions expand and evolve, they face increasing challenges in providing logistics services (Dabral & Purohit, 2023). The primary issues include insufficient talent development, inadequate succession planning, corporate culture deficiencies, lack of diversity and inclusion, and sustainability challenges (Figure 1).

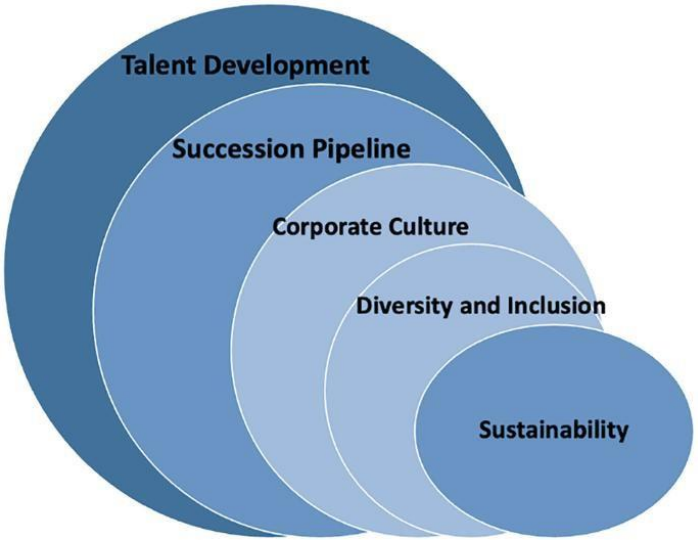

Figure 1: HRM Challenges (Source: Kok & Akbari, 2023)

Moreover, universities face significant challenges in optimizing logistics service delivery because of the constantly evolving structural and organizational dynamics inherent in academic institutions (Arnout et al., 2024). Logistics management is essential for sustaining an effective operational environment in universities as it underpins academic programs, research, and nearly all student-related services (Berman et al., 2021). Logistics management is essential to the smooth operation of universities, as it handles transportation, housing, supply, distribution of services and commodities to and from the university, and mobility within the campus (Bukoye & Gadiraju, 2022). Nevertheless, Saudi institutions encounter many logistics obstacles that impede their operational efficiency. Certain inefficiencies may be succinctly articulated using key performance metrics such as delivery time, resource usage, and employee satisfaction levels (Stalmachova et al., 2021).

Ineffective workforce management is a challenge that negatively impacts service delivery speed and organizational expenses (Asamani et al., 2021). For instance, an acute shortage of workers in the morning or evening can hamper the transport of goods and delay responses to facility management requests (Chang et al., 2023). Another critical challenge is limited spending on the training and professional development of logistics employees (Elendu et al., 2024). For instance, employees should be introduced to the most up-to-date logistics technologies and digital infrastructure and aspire for efficient solutions. The lack of an effective training system also poses the risk that staff with insufficient skills may hamper service delivery and worsen the operational inefficiency of new logistics systems and technologies.

Recent Advancements in Global University Logistics

Although deficiencies negatively impact university settings, global best practices suggest that effective HRM can improve the efficiency of university logistics services (Kutieshat & Farmanesh, 2022). Recent developments in global university logistics stem from technological innovation, sustainability programs, and rising complexities in academic

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operations (Figure 2). Educational institutions that deploy the Internet of Things, Artificial Intelligence (AI), and data analytics systems benefit from increased supply chain optimization, live asset monitoring, and inventory management (Paramesha et al., 2024). Green initiatives have gained attention because sustainability goals influence logistical work, including sustainable buying techniques, environmentally friendly delivery systems, and waste reduction efforts (Bharwani & Mathews, 2023). Higher education institutions select tailored logistics solutions, particularly for research material cold chain maintenance, combined with efficient student dining food delivery requirements (Ma et al., 2024). Robotics and automation continue to lower operational expenses while boosting operational precision through robotic sorting methods and autonomous delivery systems (Licardo et al., 2024). Modern logistics solutions help universities achieve academic research and operational objectives by maintaining operational efficiency in a changing educational environment.

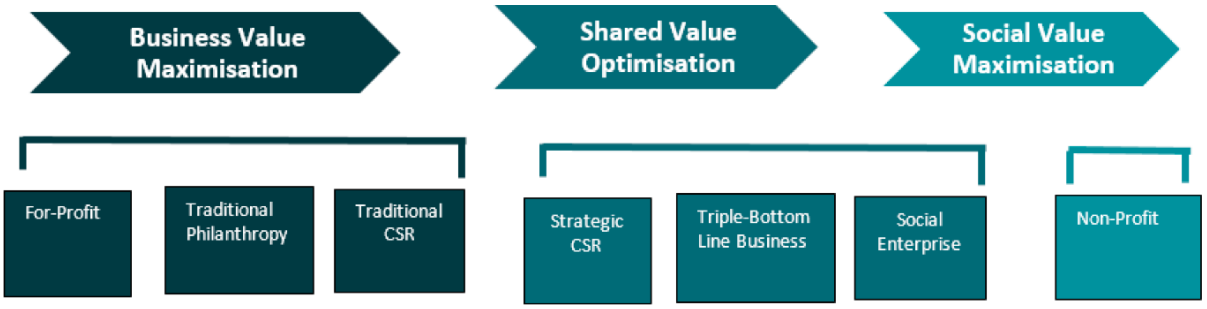

Figure 2: Recent Advancement for Shared Value Creation based on Logistics Services (Source: Zhao, 2020)

The government's initiatives to diversify the economy through Saudi Vision 2030 have led to increased investment in higher education institutions, including the establishment of new satellite campuses and the integration of learning technologies (Abdullateef et al., 2023). Numerous universities in Saudi Arabia are continually evolving and modernizing, necessitating the implementation of efficient and effective HRM systems tailored to their specific contexts. Campus necessities extend beyond tangible assets, including facilities and transport fleets, among other resources (Anderson et al., 2021). HRM systems must accommodate knowledge workers and other users involved in diverse technology-mediated logistics operations.

METHODOLOGY

This study utilizes a secondary qualitative methodology to examine HRM functions aimed at enhancing logistics services within Saudi universities. Secondary data sources, including journal articles, reports, case studies, and government publications, were analyzed to identify the challenges and opportunities in HRM within the logistics sector. A qualitative method was employed to examine the contextual and nuanced dimensions of HRM functions, emphasizing their strategic function in enhancing logistics services.

A thematic analysis was conducted on the collected data, emphasizing the patterns and insights relevant to HRM in logistics. Key themes, including recruitment, training, and workforce planning were examined to understand their impact on logistical efficiency. The data were sourced from reputable academic databases, such as PubMed, JSTOR, and Scopus, ensuring credibility and relevance. This methodology allows for an in-depth examination of existing literature while considering the unique cultural and organizational dynamics of Saudi universities. By synthesizing findings from multiple secondary sources, this study aims to provide a comprehensive understanding of how HRM functions can address logistics challenges and leverage optimization opportunities. Ethical considerations were upheld by ensuring proper attribution to all sources and maintaining objectivity throughout the analyses.

RESULTS

Exploring the Challenges Faced by HR Departments in Enhancing Logistics Services

The following section presents the challenges experienced by HR departments in enhancing logistics services (Figure 3).

Inefficient Staff Management

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The primary challenge universities face is the inadequate allocation and optimization of employees within logistics divisions. Insufficient staffing and the poor resource allocation can hinder the effectiveness of logistics services (Phillips et al., 2025). Staff are employed with a set of competencies, yet they are frequently not aligned with logistical needs, resulting in the underutilization or misplacement of skills. The recruitment of staff often faces challenges, particularly due to a limited pool of specialists in areas such as transport, supply chain management, and IT, which are difficult to find in universities (Simpson et al., 2021). Failure to achieve an appropriate balance in staffing can lead to disorganization within logistics operations, ultimately compromising the overall university experience.

Inadequate Training Programs

Another challenge is the limited availability of suitable training programs for logistics staff. Given the complexities of university logistics, it is essential for staff to receive adequate training and develop the necessary skills for effective operations management (Zhang, 2023). Many institutions fail to provide training or professional development to their logistics employees, hindering their ability to compete in the industry and drive innovation. Without regular training, staff struggle to adaptation to new tools, technologies, and processes designed to improve logistics, thereby escalating operational costs (Pozzi et al., 2023).

Lack of Strategic Workforce Planning

Academic institutions employ limited or often informal staffing strategies that fail to connect staffing with necessary logistics services (Håkansta et al., 2024). This approach results in issues related to staff under- or over-employment, indicating inherent disadvantages. While logistics teams with limited personnel face the challenge of managing increased workloads, leading to delays in service provision, maintaining larger teams incurs higher costs (Wasti et al., 2023). Universities exhibit deficiencies in talent management and development that hinder their ability to formulate strategic workforce plans. This situation indicates that a mismatch between staffing and operational needs leads to either resource shortage or workforce surpluses, both of which compromise logistics optimization (Ambrogio et al., 2022).

Despite these challenges, there are significant opportunities for Saudi universities to optimize logistics services through strategic HRM functions (Khayyat et al., 2024). Drawing from global best practices, several HRM interventions can be adopted to address logistics inefficiencies.

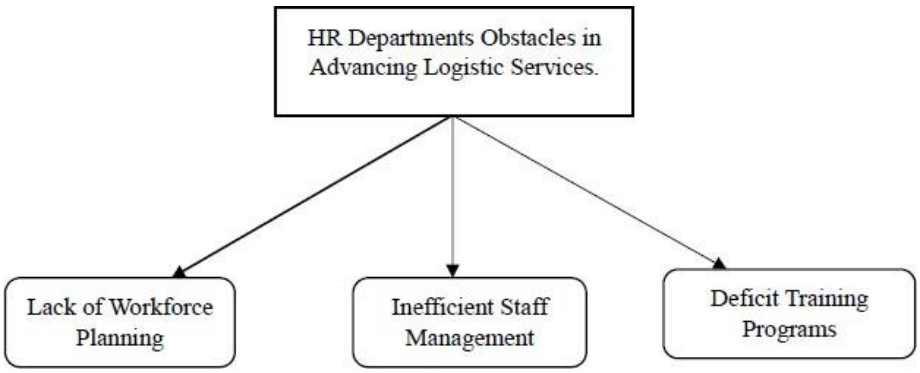

Figure 3: Challenges Faced by HR Departments

Opportunities for Improving HRM Functions to Support Logistics Optimization Goals of Saudi Universities

The following section presents literature on the opportunities available to improve HRM functions for effective alignment with logistics optimization goals (See Figure 4).

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Streamlined Recruitment Processes

Universities should consider the selection process for higher education establishments. Few factors are as crucial to logistics operations as a skilled workforce, making effective hiring practices essential (Klein et al., 2021). For instance, universities in the United States and Europe have adopted online sourcing and employment forecasting techniques to match candidates for logistics positions. Similarly, Saudi universities can improve their recruitment processes to attract candidates with the technical expertise needed to manage contemporary logistics services, including IT, supply chains, and transportation managers (Li & Jia, 2024). By targeting skilled candidates for logistics management, Saudi universities can develop qualified logistics forces to meet the growing demand for logistics services in the digital era, while addressing the current existing gaps caused by lack of logistical knowledge.

Targeted Workforce Training and Development

Logistical obstacles at Saudi universities can be overcome by implementing existing effective training programs (Almatar, 2024). Currently, most universities worldwide have implemented continuing professional development (CPD) training frameworks to ensure that staff are knowledgeable about procedures, policies, and emerging technologies. Logistics personnel in Saudi Arabian universities require training in contemporary software applications, resource management, mobility, and campus resource management, which can be addressed by HR departments in subsequent programs (Alotaibi, 2024).

In addition, universities can make use of the specialized training of staff involved in handling new technologies, such as campus mobility facilitated by AI or other online platforms for managing resources in institutions (Okunlaya et al., 2022). For instance, the application of predictive analytics can be useful to manage transportation schedules, as this will increase the delivery time efficiency or minimize resource utilization. Hence, Saudi universities should enhance the efficiency of their staff members to guarantee the proper operation of their logistics (Al Harrasi et al., 2023).

Integration of Technology in HRM Functions

Saudi universities can add new tools, such as analytical methods, in HRM (Al Nawaiseh et al., 2024). Using predictive analytics, HR managers can schedule requirements, plan logistics more effectively, and track real-time interactions. HR departments will be able to guarantee that logistics services are properly staffed, and personnel are properly assigned to both traditional and remote environments (Ambrogio et al., 2022). Such systems can combine information from other sources to improve decisions made by HR managers and overall logistics management (Esangbedo et al., 2021).

Advancements in Logistics and HRM Interventions

Digital platforms, AI, and automated solutions for logistics are becoming increasingly evident in institutions. AI may be used in campus mobility to enhance transportation systems, streamline organization, and reduce traffic congestion (Paiva et al., 2021). As these technologies become integral to universities, HR managers must recruit skilled workers for new technologies and digital infrastructure (Parry & Battista, 2023). This will assist institutions in developing their capacities to provide essential logistics to meet future requirements. Ultimately, HR managers must provide continuous training to existing employees to enable them to use new systems, technologies, and digital infrastructure (Bennett & McWhorter, 2021).

Post-Pandemic Shifts and HRM Support

Universities have increasingly adopted advanced technologies not only in their course delivery but also to improve logistical support, such as material distribution, student services, and information sharing (Renganayagalu et al., 2022). Moreover, the development of appropriate HRM strategies to prepare educators for the changes expected with the forthcoming requirements of remote and hybrid learning environments should be prioritized. However, human resource leaders should also improve employees' perceptions of change by cultivating a culture of innovative ideas, which would allow the staff to come up with possible solutions concerning the incorporation of innovative technologies into logistics processes (Shafaei & Nejati, 2024).

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Impact of Remote Learning and Digital Education

The increase in remote and hybrid learning modes due to the COVID-19 pandemic has intensified logistics management challenges for Saudi universities (Imran et al., 2023). The supply chain, particularly in terms of physical material delivery, has been disrupted, necessitating investment in digital services due to the heightened emphasis on digital learning. As universities strive to provide quality online education, there is a growing need for HR departments to reconfigure their staffing models (Rana & Kaur, 2024). The recruitment and training of personnel experienced in operational engagement with online platforms, distance education, and online student support are essential for an effective organization.

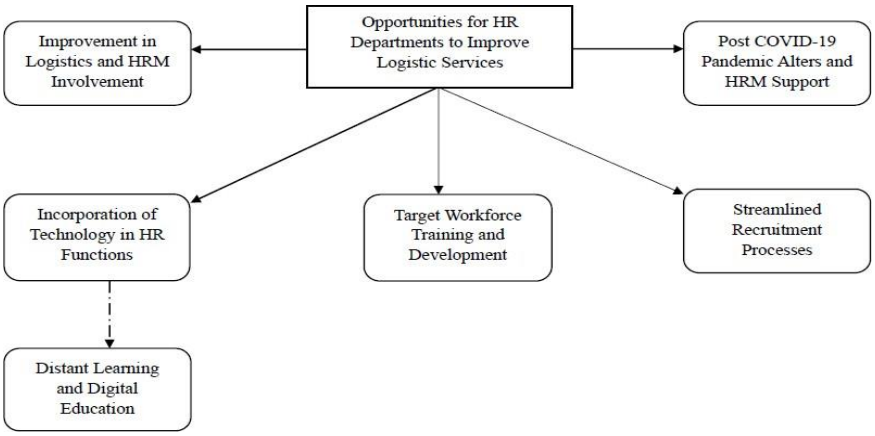

Figure 4: Opportunities Available for HR Departments

DISCUSSION

Strategies and Frameworks for Addressing Challenges and Leveraging Opportunities in HRM for Logistics Optimization

Adoption of HRM to improve university logistics is exemplified by practices in the UK and Australia. In the UK, universities have adopted intricate HRM strategies that address both traditional and contemporary logistics requirements (Kavota et al., 2024). The initial phase of integrating HRM systems into logistics management is effective workforce forecasting, in which universities often project the demand for logistics services and subsequently recruit employees accordingly. This ensures that transport, facility, and resource logistics teams are adequately staffed to manage this period effectively. Additionally, all UK universities have trained their staff involved in logistics services to acquire the necessary technical and operational knowledge to effectively utilize advanced logistics tools and techniques (Allioui et al., 2024). Professional development and the targeted hiring of staff are essential for increasing operational effectiveness and reducing service disruptions at universities (George & Wooden, 2023).

The top management of UK universities supports HRM decentralization and appreciates cross-functional integration. In most organizations, HR departments collaborate with logistics and operations managers to determine ongoing staffing requirements and review staff distribution accordingly (Ochieng, 2023). Australian universities have likewise implemented top management supportive HRM functions to use logistics operations, where logistics has been a major strategic resolution and a key functionality emphasizing efficiency and flexibility (Esan et al., 2024). One of the strategies recognized in the Australian context of staffing is the recruitment of staff with relevant experience in logistics management and IT (Ejsmont, 2021). Consequently, Australian universities have realized that as logistics service offerings become digitalized, innovation-driven functions, such as mobility apps, AI-based scheduling systems, and digital transportation management solutions, require personnel to understand these digital technologies.

Australian universities have implemented various CPD initiatives to streamline educational logistics, including staff training in managing digital infrastructures, customizing customer relations, and optimizing resource utilization (Çolak, 2023). A comparison of UK and Australian adherence to optimal approaches and coordinated HRM strategies for effective logistics reveals that Saudi universities face challenges that hinder the integration of general HRM and

logistics. Another challenge pertains to the growing student enrollment, which places significant pressure on logistics systems (Khahro & Javed, 2022). This increase in student enrollment drives higher demand for commodities such as transportation, accommodation, and IT solutions. Logistics teams in Saudi universities must adapt to the growing demands related to workforce planning and recruitment, which currently lack effective strategies (Dahinine et al., 2024).

Since the emergence of the COVID-19 pandemic, there has been an increasing focus on online classes; as a result, logistics operations have extended pressure to support online modules, online classes, and student services. The need to use technologies or tools in both teaching and learning processes as well as in providing administrative services calls for human resource departments to source technical skills (Vahdat, 2022). Furthermore, significant advancements are needed in clarify the connection between the implemented HRM functions and overall logistics operations in Saudi universities. This situation has resulted in resource disparities, logistical challenges, and the overall deceleration of university operations. Consequently, the implementation of strategic HRM functions in Saudi universities has yielded significant long-term benefits for logistics operations. An advantage of collaborating with remote workers is enhanced productivity. Human resource departments supply staffing needs that align with logistics demands during peak periods and routine daily operations. This addresses specific bottlenecks, improves service delivery, and fosters an efficient campus environment for learning, work, and residence.

Furthermore, integrating HRM functions into logistics can lead to significant cost savings, resulting in reduced expenses that may be redirected toward expanding existing university services or facilities. Implementation of HRM functions enhances service delivery quality. This study posits that adequately trained and staffed logistics teams are better equipped to manage various facets of university operations, including transportation and the digital environment. To enhance their status as leading global universities, Saudi institutions should prioritize logistics management operations supported by effective HRM. Saudi universities are advancing their initiatives in alignment with Vision 2030, while HRM functions are improving logistics to support the long-term goals of education and human capital in the Kingdom of Saudi Arabia. Implementation of an automated and integrated people strategy in universities enables the monitoring of logistics personnel's performance, skill deficiencies, and learning outcomes.

CONCLUSION AND RECOMMENDATIONS

The logistics challenges faced by Saudi institutions are significant. Technological advancements and the ongoing shift toward digital resources in education provide opportunities for HR departments to address the emerging expectations of logistics services. Saudi universities can use this technique in HRM to align with Vision 2030 by establishing a sustainable and creative logistics system that positions them as future leaders in educational logistics. To fulfill the goals of Saudi Vision 2030, colleges must adopt HRM functions that promote the improvement of logistics services. This includes the following:

1. **Recruitment Strategies:** Universities should prioritize the recruitment of skilled professionals with expertise in logistics and technology management to ensure that HR practices align with the increasing complexity of university operations.

2. **Training Programs:** HR departments should implement comprehensive training programs that focus on logistics management, digital infrastructure, and agile operational strategies. This will empower staff to adapt to the changing demands of university logistics, particularly during the post-pandemic era.

3. **Workforce Planning:** Universities should adopt predictive analytics to plan for future manpower needs, ensuring that staffing levels align with logistics demands and operational goals.

4. **Collaboration with Technology:** As part of Vision 2030's emphasis on digital transformation, HRM functions must support the integration of new technologies, such as AI and machine learning, into logistics services.

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