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Research Article

Literature Review on the Current State and Prospects of Human Resource Management and Supply Chain Management Education in Saudi Universities

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ABSTRACT

This review examines the current state of human resource management (HRM) and supply chain management (SCM) education in Saudi universities, focusing on curriculum development, faculty qualifications, industry collaboration, and technology integration. The findings from 26 articles suggest that while significant progress has been made in aligning university programs with industry needs, challenges persist, particularly in providing students with practical experience and ensuring faculty expertise. This review makes key recommendations, including enhancing partnerships between universities and industry to offer students more hands-on learning opportunities, developing faculty training programs to bridge the expertise gap, and incorporating digital tools and case-based learning into curricula to improve the relevance of the education provided. Future research should explore the impact of digital tools on HRM education and the integration of advanced supply chain technologies in university programs to ensure that the programs remain aligned with industry developments. Furthermore, a comparison of qualitative and quantitative research methods reveals that while qualitative approaches provide in-depth, context-rich insights into complex phenomena, the methods suffer from limited generalizability. Conversely, quantitative methods offer statistical relevance and broad applicability but may overlook nuanced, contextual issues. By addressing these challenges and incorporating these insights, Saudi universities can enhance their HRM and SCM programs, ensuring they equip graduates with the necessary skills to thrive in a rapidly evolving global business landscape.

Keywords: human resource management (HRM), supply chain management (SCM), universities, curriculum faculty expertise, industry collaboration, technology adoption

Introduction

Human resource management (HRM) and supply chain management (SCM) are two critical domains in contemporary organizations; these domains focus on enhancing efficiency and organizational performance (Jena & Ghadge, 2021). According to Ochieng (2023), HRM is the operational management of individuals inside organizations to ensure that companies can achieve their goals by hiring, training, and growing their human resource capital. Conversely, SCM is the strategic management of the supply chain of companies engaged in delivering goods and services to end users (Enz & Lambert, 2023).

Saudi universities are aligning their training programs in HRM and SCM with the Saudi Vision 2030 objectives; Vision 2030 seeks to diversify Saudi Arabia's economy and create a sustainable, knowledge-driven society (Alrashedi, 2024). In HRM, institutions concentrate on cultivating a proficient and versatile workforce to satisfy the growing demands of the business sector and governmental agencies. This approach entails incorporating sustainable development concepts into HR practices to ensure that human resources foster long-term growth and innovation (Klimovskikh et al., 2023). Universities integrate strategic HRM frameworks that align with Saudi Arabia's Vision 2030 goals of improving labor productivity, advancing talent development, and encouraging inclusion.

Saudi universities are addressing the growing significance of logistics and supply chain skills in SCM (Al Harrasi et al., 2023). Numerous universities, including Fahad Bin Sultan University, have established specialist

departments in logistics and SCM, tailoring their courses to the expanding logistics industry in Saudi Arabia (Arif & Aldosary, 2023). Saudi universities participate in research programs and collaborations aligned with Saudi Vision 2030 and the Sustainable Development Goals, ensuring that the future workforce is adequately prepared to contribute to the Saudi Arabia Kingdom's strategic economic transformation (Arnout et al., 2024).

Global challenges confronting HRM and SCM education include the rapid progress of technical innovations, the need for continuous adaptation to global market variations, and the increasing demand for sustainable practices (Agarwal et al., 2022). Educators face the challenge of equipping students with the skills necessary to navigate these new trends while addressing issues of diversity, equity, and inclusion within the workplace (Rahimi & Oh, 2024). The global challenges to SCM include adapting to disruptions caused by the COVID-19 pandemic, geopolitical tensions, and climate change (Salinas-Navarro et al., 2022). The increasing reliance on technology to streamline operations adds complexity to SCM education because technology demands that students become proficient in using new software tools and performing data analytics. Saudi Arabia is addressing these challenges through initiatives aligned with Vision 2030, which aims to diversify the economy and enhance workforce competencies in HRM and SCM (Campos-García et al., 2024). Moreover, Saudi Arabia is addressing local challenges, including dependence on expatriate labor, the necessity for increased gender diversity in the workforce, and a transition toward more sustainable business practices (Darwish et al., 2023).

This literature review presents the current state of HRM and SCM education in Saudi universities, along with the associated shortcomings and opportunities. Moreover, the review discusses how HRM and SCM education programs align with Saudi Vision 2030 and explores the influence of the global environment and technology on these programs. Further, this review aims to identify key areas for improvement in existing programs to enhance the understanding of how Saudi universities can create valuable and relevant HRM and SCM programs to advance the country's development.

Research Objectives

1. To assess the alignment of HRM and SCM education with the strategic goals of Saudi Vision 2030, particularly regarding workforce development, economic diversification, and technological integration.
2. To identify the challenges Saudi universities face in delivering effective HRM and SCM education, considering global trends, local needs, and educational constraints.
3. To explore the potential future developments in HRM and SCM education in Saudi Arabia, particularly in response to global shifts such as digital transformation, sustainability, and evolving labor market demands.

Research Questions

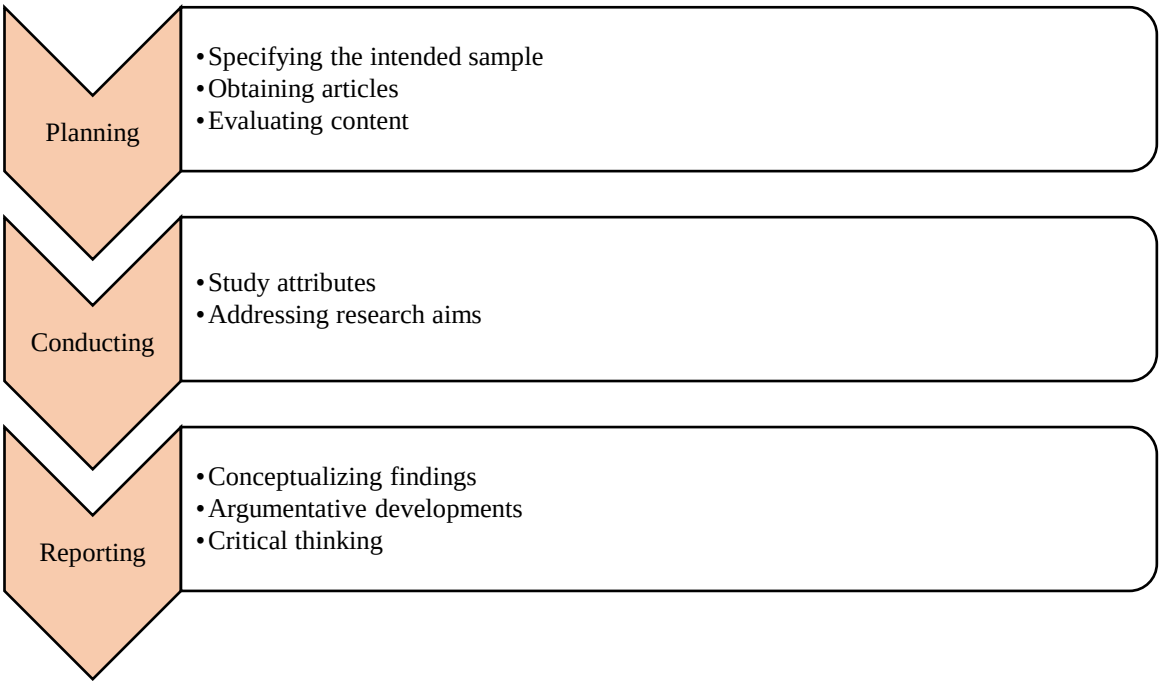
1. How well do HRM and SCM education in Saudi universities align with the goals of Saudi Vision 2030, particularly regarding workforce development, economic diversification, and technological innovation?
2. What are the main challenges Saudi universities face in delivering HRM and SCM education, and how do these challenges compare to global trends?
3. How are Saudi universities adapting their HRM and SCM programs to address emerging global challenges such as digitalization, sustainability, and supply chain resilience?

Methods

This research uses a literature review approach to evaluate the present and future of HRM and SCM programs at Saudi universities. This review approach utilizes a comprehensive and reproducible analysis structured into three main phases: planning, conducting, and reporting.

Figure 1

Research Methodology Process



Phase 1: Planning

The scope of this study comprises HRM and SCM education in Saudi universities, focusing on curriculum development, faculty qualifications, collaboration with industry, and technology integration. To select literature, search criteria and key terms were established. Moreover, the author reviewed the literature and finalized the selection of articles according to the set criteria and key terms.

Phase 2: Conducting the Review

The review retrieved relevant literature from reputable academic databases: Google Scholar, Scopus, Web of Science, ERIC, ProQuest, JSTOR, and ScienceDirect. The search was restricted to peer-reviewed journal articles, conference proceedings, and institutional reports published between 2010 and 2023 to focus on contemporary realities.

A number of keyword searches were applied to terms such as “HRM education Saudi Arabia”, “SCM education Saudi Arabia”, and “Vision 2030 education”. Boolean operators were used for more specific searches and to exclude irrelevant studies.

Themes, methodologies, and key findings from the selected studies were classified using a structured identification coding framework. Further, research methods (qualitative, quantitative, and mixed methods); primary focus areas (curriculum, faculty qualifications, industry collaboration, and technology integration); and research gaps were categorized in the literature.

Phase 3: Reporting the Findings

Synthesized results from the analysis are presented in tabular and narrative formats to show methodological patterns, thematic trends, and future research opportunities. This review included 26 articles employing quantitative, qualitative, and mixed-methods approaches (Table 1). The results underscore the need to update the curriculum, implement faculty training initiatives, strengthen university–industry partnerships, and incorporate digital tools in HRM and SCM education.

Table 1

Research Methods in the Reviewed Studies

Research Method	**Number of Studies**	**Type**	**Author (Year)**
Qualitative method	**17**		
	2	Semi-structured interviews	Fuchs, 2022; Jackson et al., 2023
	3	Exploratory essays	Heath & Waymer, 2021; Misselke et al., 2024; Li, 2022
	10	Review articles	Tlili et al., 2021; Panwar et al., 2022; Pass & Ridgway, 2022; Garg, 2021; Grybauskas et al., 2022; Chopra et al., 2024; Eyo-Udo, 2024; Khoa, 2024; Birou et al., 2022; Thite, 2022
	2	Case studies	Ninassi & Burrell, 2023; Lu & Zoghi, 2023
Quantitative	**5**		
	5	Cross-sectional	Dahinine et al., 2023; Alhumoudi & Alfarhan, 2024; Malik et al., 2021; Zihan et al., 2024; Alrashedi, 2024
Mixed-methods	**4**	Semi-structured interviews; survey questionnaires	Belhadi et al., 2022; Lu, 2021; Ahmed & Opoku, 2022; Chapungu & Nhamo, 2024
Total	**26**		

Results

Challenges Faced by Saudi Universities in Providing Effective HRM and SCM Education, Considering Global Trends, Local Needs, and Educational Constraints

Table 2 provides a summary of the literature on the challenges Saudi universities face when delivering HRM and SCM education.

Curriculum Challenges

Many studies call for improvements in aligning HRM and SCM curricula with industry requirements (Birou et al., 2022). Today's curricula are characterized by lectures, focusing on theoretical learning while neglecting the hands-on experience essential for practice. This disconnect between academic theories and the realities of today's business world has necessitated a demand for increased functional and application-based training and scenario-based training in HRM and SCM disciplines (Ninassi & Burrell, 2023). Utilizing examples provides students with optimal learning experiences of genuine business challenges, enhancing the students' problem-solving and decision-making abilities, which is advantageous in the job market. Moreover, integrating internships and cooperative education components can give students a significant understanding of the industry, facilitating the application of academic concepts through practical experience and critical insight into the operational contexts of HRM and SCM (Lu, 2021).

Faculty Expertise

Another challenge is the lack of sufficient faculty experience in best industry practices. Most teachers of HRM and SCM courses are recruited from academia and have minimal practical experience (Misselke et al., 2024). This lack can negatively affect the quality and practical relevance of knowledge the instructors provide their students. In this regard, universities may have to ensure they hire faculty members with ample industrial experience or offer opportunities for faculty to interface with industry (Li, 2022). This approach can allow faculty to bridge the gap between academic and business domains, ensuring graduates receive more relevant and practical training.

Industry Collaboration

The lack of effective partnerships between universities and industry is a setback that reduces students' practical exposure (Chapungu & Nhamo, 2024). There should be close cooperation between academic institutions

and industry to align the curriculum with market demands. This cooperation can lead to industry-oriented project work, lectures and seminars from field practitioners, and collaborative research projects (Lu & Zoghi, 2023). All these activities contribute to the curriculum and prepare students to face market challenges after completing their studies. Improved collaboration with industry can also create paths to internships and employment for students, easing the transition from the classroom to workplace.

Technology Integration

The integration of information technology into both HRM and SCM courses is still in its nascent phase in most Saudi institutions (Alrashedi, 2024). The transition to a digital environment in the business sector necessitates the use of contemporary technology-driven platforms in the HRM and SCM curricula of educational institutions. Software solutions such as enterprise resource planning systems, human resource information systems, warehouse management systems, procurement systems, and other executive business intelligence tools are increasingly essential in the industry. Therefore, integrating these technologies into the university curriculum enables students to get practical experience in using them professionally (Ahmed & Opoku, 2022). Further, integrating formal electronic learning tools with virtual world simulations may enhance the learning process and better align with today's corporate landscape.

Table 2

Key Challenges in HRM and SCM Education

Challenge	Number of Studies	Description	Suggested Solutions	Author (Year)
Curriculum gaps	3	Lack of practical application in curricula	Introduce case-based and experiential learning	Birou et al., 2022; Ninassi & Burrell, 2023; Lu, 2021
Faculty expertise	2	Limited faculty exposure to industry	Faculty development programs and industry partnerships	Misselke et al., 2024; Li, 2022
Industry collaboration	2	Weak university–industry ties	Establish internships, cooperative programs, and guest lectures	Chapungu & Nhamo, 2024; Lu & Zoghi, 2023
Technology adoption	2	Low integration of digital tools in education	Incorporate HRM and SCM software training	Ahmed & Opoku, 2022; Alrashedi, 2024
Total	**9**			

Saudi Universities' Adaptation of HRM and SCM Programs to Address Emerging Global Challenges Such as Digitalization, Sustainability, and Supply Chain Resilience

The following section presents literature on adopting HRM and SCM programs to address emerging global challenges, as summarized in Table 3.

Digitalization. The advancement of technology in company operations has compelled Saudi institutions to include digitalization in their HRM and SCM curricula (Alrashedi, 2024). Students are instructed to use sophisticated HR software solutions to streamline recruiting, enhance employee engagement, monitor performance, and perform data analytics. This integration has facilitated a transition for future HR professionals, improving their productivity and allowing them to adapt to a technology-driven workforce, which is increasingly essential in the digital era (Thite, 2022).

Universities are increasingly focusing on the potential of digital technologies, such as artificial intelligence (AI), blockchain, and big data in SCM (Eyo-Udo, 2024). Students are taught how to make the supply chain visible using these technologies, leverage these technologies for predictive analytics of demand forecasting, optimize inventory management, and improve overall operational efficiency (Khoa, 2024). Within the curriculum, students

engage with the latest digital tools and software in logistics and supply chain planning through hands-on training, ensuring they are well-prepared in the workplace to drive companies' supply chain digital transformation.

Sustainability. Saudi universities emphasize sustainability in their HRM and SCM programs, reflecting global concerns about environmental and social responsibility (Alhumoudi & Alfarhan, 2024). Universities also contemplate including courses in HRM that emphasize ethical leadership and sustainable HR practices, focusing on fostering a company culture where social and environmental responsibility is paramount. These programs encompass training on formulating green policies within a firm, executing sustainability initiatives, and involving personnel in corporate social responsibility endeavors (Malik et al., 2021). Consequently, graduates of HRM schools are equipped to guide firms in implementing sustainable business practices and advancing sustainability efforts across the workforce (Zihan et al., 2024).

Similarly, SCM programs are evolving to address the need for sustainability in global supply networks. Students learn to develop a supply chain plan that reduces waste, lowers environmental impact, and ethically sources materials. The curriculum prioritizes sustainability, highlighting the necessity of embedding it within supply chain operations and equipping students to oversee initiatives that foster environmentally sound, socially responsible, and economically viable supply chains (Chopra et al., 2024).

Supply Chain Resilience. The COVID-19 pandemic and other worldwide disruptions have made it evident that global supply systems are highly susceptible to crises (Panwar et al., 2022). Consequently, Saudi universities' SCM curricula focus on enhancing resilience. Universities provide courses in risk management, contingency planning, and crisis management to equip students with the skills necessary to develop supply chains capable of withstanding such disruptions. This approach underscores the need to incorporate flexibility into supply chains through diversity, an agile mindset, and decision-making facilitated by digital technology to provide real-time performance insights (Belhadi et al., 2022).

University HRM programs now educate students to develop workforce resilience, which has become essential for maintaining operational continuity during crises. Training HR experts is crucial for managing remote teams, ensuring employee engagement during disruptions, and establishing efficient health and safety protocols (Pass & Ridgway, 2022). Such training provides ways to manage staff well-being, enhance agility, and cultivate leadership capacity to navigate challenging circumstances. This resilient-focused approach ensures that HR professionals can maintain organizational continuity, support employee well-being, and facilitate adaptation to work environments, including remote and hybrid models (Garg, 2021).

Collaboration with Industry. To address emerging global challenges, Saudi institutions must incorporate collaboration into their HRM and SCM curricula (Dahinine et al., 2024). Consequently, several colleges partner with prominent global corporations, governmental agencies, and international organizations to incorporate the newest trends and practices into their courses. This incorporation enables colleges to forge internships, perform case studies, and hold guest lectures by industry professionals to provide practical insights (Fuchs, 2022). Further, students engage with industry experts, gaining insights from practical experience and cutting-edge technology while acquiring a comprehensive understanding of how organizations address problems related to digitalization, sustainability, and resilience (Grybauskas et al., 2022).

These industry connections also create a highly dynamic environment that enables the students to apply theoretical knowledge to real-world problems. In universities, industry leaders are involved in the curriculum design to ensure that programs are updated and aligned with workforce demands (Jackson et al., 2023). Additionally, these collaborations allow for research partnerships among universities and industry experts, which can foster groundbreaking HRM and SCM research, such as creating new sustainable supply chains or incorporating AI into HR processes.

International Accreditation and Research. Saudi institutions have received international certification for their HRM and SCM programs, ensuring alignment with global standards (Dahinine et al., 2024). External evaluations ensure a high-quality curriculum, enabling graduates to compete in the worldwide job market. Moreover, Saudi universities are often subjected to thorough assessments of their curricular content, instructional methodologies, and industry participation, facilitating continuous refinement and improvement (Heath & Waymer, 2021). Notably, the research programs in Saudi universities are accredited.

Saudi universities increasingly prioritize academic research on digital transformation, sustainability, and the resilience of HRM and SCM. This prioritization encourages teachers and students to investigate innovative technologies, techniques, and tactics to tackle emerging global challenges (Tlili et al., 2021). Consequently, new

knowledge is generated from this research, which can be included in the curriculum and disseminated to the wider academic and professional communities.

Table 3

Opportunities and Developments

Theme	Number of Studies	Author (Year)	Key Findings
Curriculum development	3	Dahinine et al., 2024; Heath & Waymer, 2021; Tlili et al., 2021	Need for curriculum alignment with industry requirements and technological advancements
Supply chain resilience	4	Panwar et al., 2022; Belhadi et al., 2022; Pass & Ridgway, 2022; Garg, 2021	Shortage of qualified instructors and emphasis on faculty with industry experience
Sustainability	4	Alhumoudi & Alfarhan, 2024; Malik et al., 2021; Zihan et al., 2024; Chopra et al., 2024	This theme includes teaching about metrics that can be used to gauge performance and guide decisions in the area of sustainability-related supply chain management
Industry collaboration	5	Dahinine et al., 2024; Fuchs, 2022; Grybauskas et al., 2022; Jackson et al., 2023; Chopra et al., 2024	Incorporation of digital tools essential for modern HRM and SCM education
Digitalization	4	Alrashedi, 2024; Thite, 2022; Eyo-Udo, 2024; Khoa, 2024	Universities continually underscore the role of the human factor in digital transformation, enabling students to lead the process of shaping change in organizations that are deploying new technologies
Total	**20**		

Discussion

Comparative Insights

Comparing the HRM and SCM educational approaches in Saudi Arabia with the approaches in other countries, particularly in the Gulf Cooperation Council and other emerging economies, offers valuable insights into Saudi institutions (Durugbo et al., 2021). Nations such as the United Arab Emirates (UAE) have integrated industrial partnerships and technology into their educational frameworks (Hojeij, 2024). These initiatives aim to increase the number of graduates who can get ready for employment in the continually evolving corporate landscape. Moreover, in the UAE, universities have developed solid links with industry over the years through educational partnerships, work-based learning, training placements, et cetera (Subramanian, 2024). These partnerships help to keep the curriculum realistic and provide students with practical experience. Moreover, integrating sustainable supply chain practices and technologies such as supply chain analytics, artificial intelligence, and cloud-based HRM systems into the curriculum has boosted graduates' placement prospects (Merkert et al., 2023).

Saudi institutions can implement similar interventions based on these models to guarantee that employers' expectations align with university education. Moreover, institutions in developing countries in Asia and Africa provide insights into the delivery of HRM and SCM education tailored to local economic and cultural contexts (Dong & Salwana, 2022). For example, developing countries such as India and South Africa have created programs that meet their local needs; for instance, addressing challenges in rural procurement and supply chains and strategies for unlocking competitive advantages in the global supply chain. These approaches guide public universities in Saudi Arabia in implementing programs that meet all the needs of the Saudi economy, especially in sectors prioritized by Saudi Arabia's Vision 2030 (Abdullateef et al., 2023).

Policy and Curriculum Development

To align educational outcomes with the requirements of the job market, it is imperative to implement measures that encourage and enhance collaboration between universities and industry. Universities and industries have a symbiotic relationship: the former cultivate talent while the latter furnishes the practical experience that students need.

One key priority for policy formulation is incorporating applications within educational practices. Providing students with the latest software tools utilized in the business realm ensures students become proficient in navigating the technological landscape in their workplaces. Another aspect of curriculum development pertains to programs aiming to enhance faculty capabilities. Policies should facilitate short courses and workshops to ensure that faculty members are well-acquainted with contemporary market trends and prevailing technologies. These modifications will empower universities to equip their faculty to enhance the quality of education provided, ensuring the education is optimal and relevant in the contemporary marketplace.

Conclusion and Recommendations

This review addresses advancements of Saudi universities in HRM and SCM education and development. Notably, there are significant gaps in the delivery of this education, which may adversely affect students' preparedness for the professional environment. There is a particularly evident lack of opportunities for experiential learning and case analysis, crucial in functional areas such as HRM and SCM that actively reflect industry trends and innovations.

This review offers several practical recommendations for university administrators and policymakers:

1. Firstly, the development of partnerships with industries is key: Enhanced interactions with businesses allow universities to provide their students with internships, live projects, and mentored opportunities, thus closing the gap between classroom theory and practice. These partnerships can also measure the relevance of what students are learning by comparing their coursework with current HRM and SCM practices.
2. Secondly, it is essential to develop faculty training programs to address the challenge of inadequate expertise. Many universities have qualified academicians; however, sometimes the academicians lack industry exposure. Providing faculty members with development opportunities, attending industry events, and collaborating with companies can be beneficial in integrating the latest industry knowledge into the classroom. This approach would improve the quality of instruction and advance student understanding of various HRM and SCM practices.
3. Thirdly, integrating digital technologies and case-based learning into the curriculum will be highly advantageous. HRM and SCM professionals employ digital technology tools and approaches such as HRM software, SCM platforms, and analytics. Integrating these tools into the curriculum would help familiarize students with the technology they are likely to encounter in the workplace. Similarly, case-based learning may help students examine numerous events and develop the critical thinking skills necessary to address practical challenges commonly faced by entrepreneurs.

Future studies should determine how digital technologies affect HRM education and training. As these technologies become increasingly important in advancing companies through digital transformation, it is critical to understand how these technologies can be used in educational settings. Furthermore, research into implementing effective supply chain technologies in universities might help enhance the integration of new, advanced technologies in SCM programs. These research directions will assist in ensuring the continuity and effectiveness of HRM and SCM education in Saudi institutions and improve students' competence levels in the changing global business environment.

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