


Bridging the Gap: Human Resource Approaches to Realizing the Madani Framework's Vision for Graduate Employability in Malaysia

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Abstract:

This research critically examines the nexus between Human Resource (HR) practices and the Madani Framework's influence on enhancing graduate employability in Malaysia's higher education sector. Employing a systematic literature review methodology based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, the study investigates how human resources strategies within educational institutions can align with the Madani Framework to cultivate a workforce poised for success in high-value industries. The systematic review synthesizes findings from 28 relevant studies, comprising quantitative, qualitative, and mixed-methods research, identified through a comprehensive database search and screening process. The included studies are categorized into seven distinct themes: graduate employability skills and competencies, curriculum alignment and industry relevance, HR practices in higher education, the Madani Framework and educational policies, university-industry collaboration, faculty development and continuous learning, and graduate employability and economic development. The review highlights a persistent skills mismatch between graduate competencies and evolving industry demands, underscoring the need for strategic interventions. HR practices emerge as a powerful catalyst, enabling higher education institutions (HEIs) to align curricula with industry needs, foster industry-relevant skills among graduates, and embed the Madani Framework's principles of sustainability, ethics, and social responsibility. Key recommendations include conducting curriculum mapping and gap analyses, engaging in stakeholder collaborations, integrating emerging technologies and Industry 4.0 skills, and establishing mechanisms for continuous curriculum review and faculty development. Furthermore, the review underscores the pivotal role of HR strategies in promoting and sustaining effective university-industry collaborations, facilitating knowledge exchange and experiential learning opportunities. Leveraging innovative HR practices, such as aligning recruitment processes and performance evaluation criteria with the Madani Framework's competencies, is crucial for fostering a holistic and socially responsible workforce. The study contributes valuable insights into the strategic role of HR in harmonizing educational outcomes with industry requirements, suggesting a model for leveraging human resource capabilities to fulfill the Madani Framework's aspirations. Recommendations are provided for policymakers, educators, and HR professionals to foster a collaborative, strategic approach to developing a resilient, adaptable, and employable graduate pool aligned with national development goals.

Keywords: *Madani Framework, Skilled Worker, Human Resource, Policy Makers*

Citation: Abiddin, N. Z., & Rosmaria, O. (2024). Bridging the Gap: Human Resource Approaches to Realizing the Madani Framework's Vision for Graduate Employability in Malaysia. In M. Shelley & O. T. Ozturk (Eds.), *Proceedings of ICRES 2024-- International Conference on Research in Education and Science* (pp. XXX-XXX). Antalya, Turkiye. ISTES Organization.

Introduction

Malaysia's higher education has witnessed significant changes as the country aspires to become a developed nation and a knowledge-centred economy (Ismail et al., 2018; Khoo et al., 2022; Ministry of Higher Education [MOHE], 2015). The Malaysian government recognized that economic development could only be achieved if there will be sufficient skilled human capital to transform the economy. This has prompted the government to develop the Madani Framework and other strategic initiatives intended to improve the graduates' employment and competitiveness (Mohamad Rasul et al., 2022; MOHE, 2019). The Madani Framework utilises sustainability, systems thinking, ethics and societal well-being to instil the graduates with the necessary skills and capabilities to work within high value sectors and assist the country achieve its long-term development objectives (MOHE, 2019; Nordin et al., 2021).

The implementation of these policies has resulted in a persistent skills mismatch between industry demands and graduate capabilities. That not only constrains graduate employability but also obstructs nation's quest to develop a strong, knowledge-based workforce geared toward the complexities of the Fourth Industrial Revolution Khoo et al., (2022); Subramaniam & Khawaji, (2022); World Bank, (2021). It will take a broader formation of education policies and industry requirements converge with effective human resource HR practices in higher education institutions HEIs to address and manage the skills mismatch challenge. Currently, there is a persistent skills mismatch between the competencies instilled in graduates during their tenure at the tertiary level and the changing demands of high value-added industries despite the Madani Framework implemented by the Malaysian government Ismail et al., (2018), Khoo et al., (2022); Subramaniam & Khawaji, (2022). That not only constrains their employability but also challenges the nation's ambition of building a robust, knowledge-based workforce ill-suited to IR 4.0 complexities (World Bank, 2021).

Given the factors above, a critical inquiry into the connection between HR practices and the influence of the Madani Framework on enhancing graduate employability is established in this context. HR strategies implemented in educational institutions are critical as they help realign curricula, cultivate competencies demanded by industries, and cultivate high-wage industry-ready individuals (Mohamad Rasul et al., 2022; Ting et al., 2020; World Bank, 2021). Hence the HR practices, HEIs can fully contribute the Madani Framework by translating the vision into reality, thus producing work-ready graduates able to navigate the demands of today's labor market (MOHE, 2019; Nordin et al., 2021; Ting et al., 2020). The research thus intends to:

1. Assess the alignment between the competencies fostered by current higher education curricula and the requirements of high-value industries in Malaysia.
2. Investigate the efficacy of existing HR practices within HEIs in cultivating industry-relevant skills and competencies among graduates.
3. Explore the role of HR strategies in promoting and sustaining effective university-industry collaborations that support curriculum development and experiential learning opportunities.

4. Identify innovative HR practices that can be leveraged to embed the principles and values of the Madani Framework into higher education curricula, fostering a holistic and socially responsible workforce.

By addressing these objectives, the research aims to contribute valuable insights into the strategic role of HR practices in harmonizing educational outcomes with industry requirements, ultimately enhancing the employability and competitiveness of Malaysian graduates in the dynamic job market. Through a systematic literature reviews and PRISMA approach, the study will synthesize an insights from academia and industry stakeholders to assess curriculum alignment, graduate employability rates, and the efficacy of government and university-industry collaborations under the Madani Framework (Ismail et al., 2018; MOHE, 2019; Subramaniam & Khawaji, 2022).

Literatures and Studies

The Madani Framework is an extensive policy initiative formulated by the Malaysian Ministry of Higher Education in 2019 to transform the higher education institutions in the country. Based on the principles of sustainable development, moral integrity, and citizenship well-being, the framework is designed to empower an educated, capable and responsive workforce equipped to drive the country's economic growth and societal advancement (Ministry of Higher Education [MOHE], 2019). The Madani Framework comprises six key thrusts, which include Holistic Human Development, Quality Education, Sustainable Wealth Generation, Enriching Responsible Research and Innovation, Sovereign Integrity, and Mutual Prosperity (MOHE, 2019). Each of the thrusts seeks to promote a fully-rounded learning experience that merges academic pursuit and excellence with moral causes, civil responsibilities, and entrepreneurial dispositions.

Also, the Madani Framework aims to improve the graduates' overall employability and better prepare them for the new demands of the changed working environment, advanced novelty- and high-value high-competitive level industrial processes and systems concepts (Mohamad Rasul et al., 2022; Nordin et al., 2021). Grown out of the recognition of the skills gap that has always existed between the ideal qualification's students have out of graduation and the real level of demands by employees or open job market, and spurred by the processes of the Fourth Industrial Revolution and the changing face of technology due to increasingly evolving new techs (Ismail et al., 2018; World Bank, 2021). The Madani Framework thus seeks to realize this vision by promoting the integration of industry-relevant skills and competencies within higher education curricula. Such competencies include technical and vocational skills, critical thinking, problem-solving, and interpersonal and communication skills, as well as ethical and entrepreneurial mindset among others (MOHE, 2019; Nordin et al., 2021). The framework is thus designed to make Malaysian graduates more employable and better prepared to empower the workforce and innovate different sectors.

Moreover, the Madani Framework strengthens the relationships of higher educational institutions with industry partners (Khoo et al., 2022; Yusoff et al., 2020). HEIs benefit from such collaboration through knowledge and

experience sharing, which allows aligning their curricula with demands of industry and provision of students with an opportunity to engage in experiential learning, internships, and industry-related projects. Thus, a partnership with industry partner improves graduate employment as it also supports a culture of lifelong learning and on-the-job professional development (Ting et al., 2020). The adoption of the Madani Framework's principles is expected to help HEIs in Malaysia develop graduates who are competent not only in technical aspects but also in ethics, social consciousness, and sustainability (Mohamad Rasul et al., 2022). In this way, the expected outcome of the Madani Framework implementation is to produce critical thinkers and skilled workforce that are also concerned not only about the country's socio-economic progress but also about global issues.

The literature review has identified several critical gaps between current HR practices in Malaysian HEIs and the requirements of the Madani Framework in realizing its vision of boosting graduate employability. The gaps encompass the discrepancies between curricular contents and industry needs, the absence of integrated programs for faculty development for the inculcation of Madani values and competencies, limited university-industry collaborations to facilitate experiential learning and knowledge transfer, the difficulties in recruiting and retaining top academic talents, and the lack of fit between evaluation criteria and Madani's holistic objectives. HR interventions to close these identified gaps, including curriculum revision, industry linkages, capacity-building for faculty members, integrated curricular design, talent acquisition strategies, and performance appraisal redesigns are required to enable HEIs to translate the Framework's principles into practice, realizing the goal of building a skilled, ethical, and socially responsible workforce for the nation's economic and developmental needs.

Theoretical Framework

Several theories provide a theoretical foundation for understanding the pivotal role of human resource (HR) practices in enhancing graduate employability within the context of the Madani Framework.

The Human Capital Theory (Becker, 1964)

Scholars should look at the Madani Framework through the perspective of the Human Capital Theory (Becker, 1964). Essentially, investments in human resource practices will promote graduate employability. Becker posits that it is a worthwhile investment, as it enhances the skills of the labor force. Therefore, it increases the level of productivity, a precursor for improved economic progress. In the current context, one could argue that HR practices in higher education can result in increased human capital for graduates who are more employable and add value to the employer (Becker, 1964). Moreover, the framework intends to establish a highly skilled human resource that drives the nation's economic progress through enhanced knowledge and skills (Ministry of Higher Education [MOHE], 2019; Mohd Nizwan et al. 2023). Consequently, when such HR practices are aligned to this view, higher education institutions in Malaysia invest in HR practices in their faculty to ensure they remain current in their fields and continuously integrate teaching of the Madani Framework as well since the students are future graduates (Mohamad Rasul et al., 2022; Nordin et al., 2021).

Moreover, according to Khoo et al., (2022); Yusoff et al., (2020). HR practices that offer experiential learning opportunities, such as interns, industry-based projects, and employer engagements, could further develop

students' practical skills and industry exposure. Whereas this linear alignment develops graduates' human capital, the employability projects as graduates are better skilled and, hence, more valuable to potential employers (Subramaniam & Khawaji, 2022; World Bank, 2021). Therefore, from the insights of the Human Capital Theory, HR practitioners in higher education could develop practices and initiatives that promote life-long learning, skill acquisition and maintenance, and industry readiness, to develop a workforce with the necessary competencies to excel in high-value industries for Malaysia's economy (Ismail et al., 2018; Ting et al., 2020). Therefore, where the Human Capital Theory aligned HR strategies to the vision of the Madani framework, it can trigger a spiral of events since it develops human capital, which directly influences employers' demand. Thus, there is a direct connection between these HR strategies and Malaysia's vision for a knowledge economy, which could inspire.

The Resource-Based View (RBV) (Barney, 1991)

The Resource-Based View that has been developed by Barney, (1991) offers a theoretical insight into the role of human resource practices in driving graduate employability through the Madani Framework. According to RBV, competitive advantage is a function one or more resources that are valuable, rare, inimitable and non-substitutable (Rahim et al., 2023; Ting et al., 2020). In the context of HEIs, faculty members are a critical resource that has a significant impact on the quality of education and the employability of graduates HR practices that enable HEIs to attract, develop, and retain talented faculty members can be valuable and rare resources, which HEIs may use to deliver industry-relevant curricula and highly employable graduates (Ismail et al., 2018; Khoo et al., 2022).

The Madani Framework calls for the development of a skilled and knowledgeable workforce while instilling a high degree of social responsibility which can be leveraged to enhance the economic and social health and well-being of the grand nation (MOHE, 2019). However, HEIs hoping to leverage this vision require faculties that not only know their subjects properly but also know how to inculcate the spirit of, among other principles, sustainability, ethical behavior, and the overall society's well-being. HR practices which emphasize strategic hiring and recruitment, continued and lifelong learning, and a comprehensive, competitive compensation make attracting and retaining such increasingly polarized faculties much more manageable (Mohamad Rasul et al., 2022; Nordin et al., 2021). Such faculties who pride themselves on socio-ethical teaching can be developed to enhance utilization of such resource capacities thereby enabling the institutions to develop industry-relevant curricula perfect for high-value sectors thus separating them (Khoo et al., 2022; World Bank, 2021).

Second, refer to highly demanded resources that are impossible or extremely difficult to substitute for another organization's resources. Thus, for example, by developing human resources and resorting to such aspects as faculty development programs, mentorship activities, and creating a learning-oriented culture, HEIs accumulate a unique and rare resource that can hardly be reproduced by other institutions (Mohamad Rasul et al., 2022; Yusoff et al., 2020). Moreover, by implementing the strategies of RBV and Madani Framework, HEIs can develop an outstanding resource of human capital that will be impossible or extremely difficult to imitate (Subramaniam & Khawaji, 2022). Third, integrating the orientation towards producing talented and professional students established by faculty members results in developing permanent and trainable human capital.

Whiles, human resource development (HRD) theories also offer valuable insights into the pivotal role of HR practices in enhancing graduate employability within the context of the Madani Framework. There are two relevant theories involved:

The Systems Theory (Swanson & Holton, 2009)

The Systems Theory Swanson & Holton, (2009), is also applicable and relevant in highlighting the role of HR practices in improving the employability of graduates under the Madani Framework. This theory paradigmatically teases out the comprehension of HRD as a system under internal and external pressures and forces (Khoo et al., 2022; Yusoff et al., 2020). The system theory perceives human as an HRD systems as complex entities that coincide and coexist within the HE sectors. This complexity is shared by Higher Education Institutions HEIs depiction, due to being open systems under an operating environment sectors as a systems element influencing the systems just as HR practices sector. The raison-d être of this systems matrix is in the congruence with the Madani Framework where HEI adjustments and HR practices are dependent (Ministry of Higher Education [MOHE], 2019). The adoption process is supported by HR practices. They help HEIs adapt and meet the challenges of the Madani Framework and the needs of the new-focused industries. HEIs develop curriculums that reflect the demands of the Madani Framework and its structural components: development, society, and ethics (Mohamad Rasul et al., 2022; Nordin et al., 2021). Additionally, these curriculums support the acquisition of competencies in sustainability, ethics, and societal welfare.

In addition, HR practices that incorporate faculty training and professional development can also instill instructors with the necessary pedagogical and industry-related skills and knowledge to deliver the appropriate curricula which meet the Madani Framework and the industry itself (Rahim et al., 2023; Ting et al., 2020). Therefore, by encouraging faculty members to engage in lifelong learning and adaptability, HEIs can help ensure that the knowledge and skills transference to students are also relevant and responsive to the changes and requirements of the dynamic job market. Moreover, HR practices that involve industry collaborators through internships, industry-initiated projects, and knowledge transfer activities also help bridge the gap between the current academic setting and what the industry needs requirements (Khoo et al., 2022; Yusoff et al., 2020). Such practices enable students to transfer their learning experiences into actual applications, gaining relevant skills in the process and gaining exposure to the cutting-edge tech and practice in the high-value sectors. Therefore, by utilizing HR practices within the systems theory ambit, HEIs can effectively adapt to the external demands and ensure that their learners attain the right competencies to meet the demands and the nature of the high-value industries. The increased adaptability and response to the external cannot be understated and can only serve to increase graduate employabilities, the central focus of this review.

To sum up, the Systems Theory emphasizes the role of HR practices in supporting HEIs' adaptation to their external environment namely, the Madani Framework and industry needs. When HR initiatives are aligned with the organization's strategy and practices contribute to curriculum support, faculty training, and industry engagement, HEIs can successfully address the external demands. Hence, graduates will acquire the target competencies and skills, as well as improve their employability in high-value sectors.

The Career Development Theory (Super, 1980)

The role of HR practices in raising graduate employability within the framework of the Madani framework is best explained by the Career Development Theory Super, (1980). This theory highlights the significance of career exploration, decision-making, and lifelong learning in achieving satisfaction and success within a career. Accordingly, HR performance elements such as career counseling, mentorship, and continuous professional development work effectively within the higher education context to raise students' employability. For instance, by offering career guidance platforms, HEIs help students discover their interests, strengths, and career expectations. This way, students are better positioned to decide on career choices and academic programs Ismail et al. (2018); Rahim et al. (2023). Additionally, mentorship platforms achieved through HR processes connect students with alumni, industry professionals, and experienced faculty. As a result, the students are better placed to gain insights into future employment prospects, gain practitioner advice, and understand the kind of skills and competencies demanded by the market. In summary, such ventures raise students' employability and prepare graduates for a lifetime of learning and development Mohamad Rasul et al. (2022); Ting et al. (2020).

Besides, Human resource practices that offer opportunities for professional development, including but not limited to workshops, seminars, and training programs, it can also play a significant role in equipping graduates with the necessary knowledge and skills to navigate the ever-changing job market. Human resource initiatives that can be used in line with the Madani Framework are those that develop the competencies mentioned in the framework, including sustainability, ethics, and well-being in addition to technical and job-specific skills that can be directly utilized in the work environment. By using these human resource practices to meet the Madani Framework's focus on sustainability and societal well-being, higher education institutions can develop a workforce that not only achieves their career aspirations but also fulfills broader society and environmental goals. Graduates who have acquired the skills and knowledge required to address sustainability issues and make ethical decisions can stand out to employers seeking a workforce that prioritizes social and ecological responsibility (MOHE, 2019; Subramaniam & Khawaji, 2022).

Lastly, the Career Development Theory also emphasizes the need for lifelong learning for career success. Such a perspective implies that the HR function should create conditions for continuous professional development and growth for every worker. This notion also aligns with the Madani Framework's approach when "investing in human capital makes it possible to maintain a workforce capable of adapting to evolving job market demands, which leads to greater economic development" (World Bank, 2021). To conclude, integrating the Career Development Theory's principles into HR practices in HEIs helps to ensure students' successful career exploration, choice, and lifelong learning opportunities. This, in its turn, fosters employability that allows graduates to succeed in high-growth sectors and promote societal and environmental priorities set in the Madani Framework.

Methodology

This article was written using PRISMA guidelines, otherwise known as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses. The PRISMA statement provides a comprehensive checklist and flow diagram for reporting systematic reviews and meta-analyses (Moher et al., 2009). This method is recommended by many journals and academic institutions as a standard mode of doing a systematic review. Part of the reason this article chose to use this mode is that it helps one to synthesize all the relevant academic literature more profoundly. Additionally, this article was fundamental to enable one to recognize important literature studies and how the data was collected in some of the main studies. This method used in this SLR was developed from the method used by Karabulut-ilgu et al., (2018). The SLR was based on the method shown in Figure 1.

This review will be limited to published original research articles in peer-reviewed journals or conference proceedings, including qualitative, quantitative, and mixed-methods designs, as well as literature reviews and meta-analyses. The studies must be conducted in English and involve stakeholders in the Malaysian higher education sector, specifically higher education institutions, faculty members, students, graduates, policymakers, government officials, industry partners, and employers. The review will only consider studies that explore various HR practices and strategies implemented in Malaysian HEIs, including curriculum development and alignment with industry needs, faculty training and professional development, performance management systems and evaluation metrics, recruitment and talent acquisition, and university-industry partnerships and experiential learning. The studies should not have specific comparators as the review will explore how HR practices can help boost graduate employability under the Madani Framework. The primary outcome of interest will be the improvement of graduate employability, assessed by the level of alignment between graduate competencies and industry demands, the number of graduates employed and placed using their knowledge and skills, and the level of employers' satisfaction on graduate competencies and performance, as well as integration of the Madani Framework principles into educational outcomes. The review will also include studies that assess the effectiveness of HR practices to develop a skilled, adaptable and responsible workforce as per the Madani Framework and Malaysia's economic vision.

Study Characteristics

The systematic review included records obtained through the comprehensive literature search. In total, 327 records were retrieved from diverse databases and sources. After excluding duplicates and screening titles and abstracts based on the predefined eligibility criteria, 63 records were assessed for full-text review. In the end, 28 studies were found compliant with inclusion criteria and accepted for a further analysis within the review framework. These studies integrated different types of research methodologies, including quantitative, qualitative, and mixed methods, and provided a thorough overview of the relationships between HR practices and graduate employability in the context of Malaysian HE. Thus, the review remained comprehensive in regards to the context and the focus of the analyzed studies. The studies selected for the analysis discussed multiple forms of HR practices being integrated into the Malaysian HE sectors. These included focus on curriculum development and innovation, training, and advancements for faculty, performance monitoring and appraisal tools, recruitment initiatives, and the role of university-industry partnerships. These foci were further proven against the background of their

efficiency at promoting graduate employability and ensuring the development of competencies and values, as described within the Madani Framework.

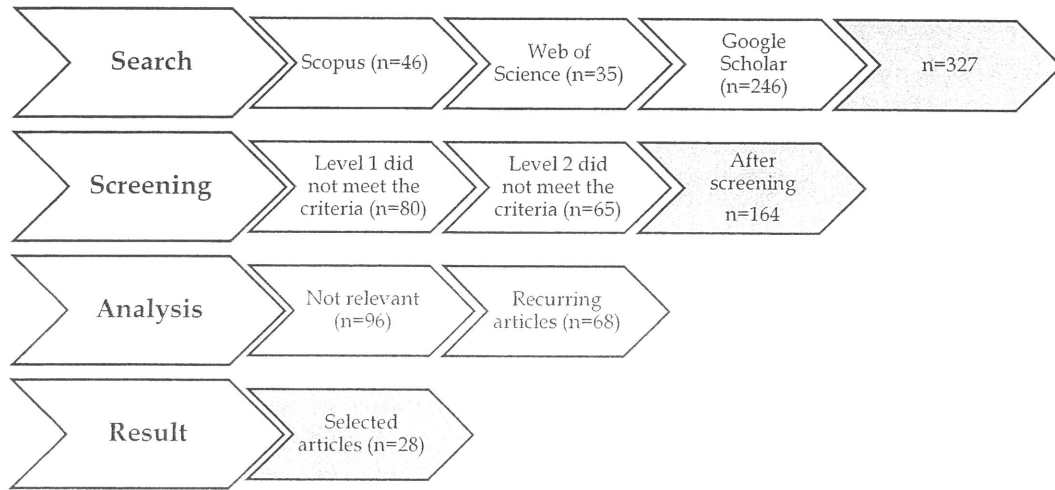


Figure 1. Adaptation of the Article Selection Process from Karabulut-Ilgu et al. (2018)

More specifically, the studies analyzed the fit between the competencies acquired by graduates and the changing requirements of high-value industries in Malaysia, and the extent to which outcomes of education complied with the principles of the Madani Framework: sustainability, ethics, and social responsibility. In addition, the studies focused on HR practices and their contribution to aiding university-industry collaborations, without which the first are unable to deliver experiential training to students or ensure that the programs align with industry needs.

Table 1. Screening Criteria Setting

Main Criterion	Inclusion Criterion	Exclusion Criterion
Year of Publication	January 2020 – December 2022	Other than January 2020 – December 2023
Type of Publication	Empirical Articles	Other than Empirical Articles
Language	English	Other than English

The two inclusion criteria were the following: 1) only those conducted within the time frame from January 2012 to December 2021 and 2) only empirical articles written in English. On the other hand, the two exclusion criteria are the following: 1) those outside the two-year time frame from January 2020 to December 2023 and 2) non-empirical studies in English. The next strategy was the exclusion of past articles and repeated studies, conducted by the method of title reading and abstract reading. Finally, the full and complete reading of the articles was conducted; at that time, the ones that did not meet the requirements of this study were excluded. Using the search strategies, the screening, and the analysis, seven articles were picked. The twenty-eight articles that have been selected are presented in Table 2.

Table 2. Selected Articles

No. of Author	Names of Authors/ Citation	Title
1.	Abdullah, N. L., Hanafiah, M. H., & Hashim, N. A. (2018).	Developing graduate employability skills through industrial training program at Malaysian polytechnics: A review on employability models.
2.	Azmi, I. A. G., Rahmah, N., Yusoff, H., & Fahmi, M. H. (2020)	The development of employability skills and readiness for the workplace: A study of Malaysian public university graduates.
3.	Chang, C. C., Hoon, T. S., & Tie, F. H. (2021)	Exploring the relevance of higher education curriculum to employability in the fourth industrial revolution.
4.	Ismail, S., Md Siraj, S., Ahmad Bashah, N., & Mohamad, Z. Z. (2018)	Redesigning higher education for industrial revolution 4.0: A human resource management perspective.
5.	Jaafar, S., & Ismail, M. H. (2021)	Madani skills development through technical and vocational education training (TVET) in Malaysia.
6.	Khoo, E. G., Muhamad-Saleh, N., & Yuen, T. M. (2022).	Prioritizing graduate employability: A study of Malaysian public universities.
7.	Lim, Y. M., Yusof, N., & Zin, M. L. M. (2020).	Exploring the industrial competency requirements of Malaysian engineers in the era of Industry 4.0.
8.	Ministry of Higher Education [MOHE]. (2019).	Madani framework for higher education institutions in Malaysia.
9.	Mohamad Rasul, M. S., Abdul Rahim, A. R., Awaludin, F. A., & Mohamad Jahaya, N. F. (2022)	Quality of higher education: The need for madani vision and digital transformation.
10.	Mohamed, R., Arshad, R., & Baharuddin, A. (2021).	Sustainable employability model for Malaysia's higher education institutions.
11.	Mukhtar, M. I., Rahim, N. F. A., & Tahir, I. M. (2020).	Curriculum mapping for employability attributes and graduate outcomes: A case study of the Malaysian public university
12.	Nordin, N., Hamid, B. A., Ripin, M. N. S., Arshad, R., & Jamaludin, N. E. (2021).	Enhancing employability in Malaysian technical vocational education and training (TVET) graduates through the madani framework.
13.	Othman, N., Ismail, S., Mohd Isa, A. H. B., & Zakuan, N. (2022).	A systematic review of the human resource management practices in higher education institutions
14.	Rahman, N. A., Hanafi, N. M., Mukhtar, M. I., & Ahmad, J. (2021).	Employability skills model for Malaysian graduates' readiness toward industry 4.0.
15.	Rahim, N. A. A., Mohamad, N., & Samah, B. A. (2023).	Engaging universities for developing employability skills: Bridging the gaps between curriculum and industry needs.
16.	Rasul, M. S. M., Gani, A. M., Ihsan, A. F., Yusoff, A. M., & Hamid, N. S. A. (2021).	Factors influencing students' employability in higher education institutions: A systematic literature review.
17.	Razali, S. N. A. M., Zainon, W. M. N. W., & Wahid, W. N. W. (2021).	Employability skills required for industry 4.0 workforce: A content analysis of job advertisements in Malaysia.
18.	Shahroom, A. A., & Hasan, N. (2022).	Industrial revolution 4.0 and the demand for employability skills: A systematic literature review.
19.	Subramaniam, S. R., & Khawaji, D. M. A. (2022).	Investigating the graduate employability skills gap in Malaysia: Insights from employers.
20.	Tan, C. K., Lim, H. E., Chan, C. M., Kamis, A., & Ismail, S. (2021).	Fostering employability skills through an entrepreneurship education program at Malaysian public universities.
21.	Ting, S. H., Shabudin, A. F. A., & Wahab, S. N. A. (2020).	The role of human resource management in ensuring employability of graduates produced by private higher education institutions.

22.	World Bank. (2021).	Aiming high: Navigating the next stage of Malaysia's development.
23.	Yaacob, N. A., Osman, M. M., & Arshad, M. M. (2021).	Assessing the readiness of Malaysian TVET educators towards the Industrial Revolution 4.0.
24.	Yusoff, M. N. H., Zainol, F. A., & Ibrahim, M. D. (2020).	Challenges of a university and industry collaboration: Overcoming the inter-organizational gap for a sustainable partnership.
25.	Zain, N. H. M., Yahaya, J. H., Fadzil, M. F., & Ahmad, N. A. (2023).	Enhancing the employability of Malaysia's graduates: Roles and strategies from higher education institutions and industry.
26.	Zaliza, A., Ali, M. S., & Azmi, F. R. (2022).	Barriers to industry engagement in Malaysian public universities.
27.	Zarin, R., Tong, C. K., Wong, K. Y., Shamshiri, R. R., & Ahmad, D. (2021).	Investigating the employability skills required for the agricultural sector in the context of the Industrial Revolution 4.0.
28.	Zulfadli, Z., Mokhtar, S. A., & Aziz, N. A. (2021).	The need for continuous professional development among academic staff in Malaysian public universities.

Through the inclusion of studies that utilized different research methodologies and focused on different dimensions of HR practices, graduate employability, and Madani Framework in the Malaysian higher education setting, this systematic review seeks to present an all-encompassing, multi-faceted view of the strategies that should be adopted to eliminate the existing gap between educational outcomes and industry demands. The results of these studies will create a fertile ground for developing an understanding of the human resource strategies that should be implemented to make the vision of the Madani Framework a reality by developing faculties that are not just flexible and fully fledged but also socially responsible, thus contributing to the improvement of graduate employability and support for Malaysia's socioeconomic framework.

Results

The systematic review of the 28 included studies has revealed the importance of human resource practices on the gap between the competencies of graduates and demands of the industry to improve graduate employability and make Malaysia's higher education practices narrow down on the vision of the Madani Framework. Many issues can be drawn from the analysis in this way and therefore offer immense implicational value to policymakers, educators and industry officials.

Table 3. Measured Themes

Theme	Articles
Graduate Employability Skills and Competencies	Abdullah et al. (2018); Azmi et al. (2020); Chang et al. (2021); Lim et al. (2020); Mukhtar et al. (2020); Rahman et al. (2021); Razali et al. (2021); Shahroom & Hasan (2022); Zarin et al. (2021)
Curriculum Alignment and Industry Relevance	Chang et al. (2021); Lim et al. (2020); Mohamed et al. (2021); Mukhtar et al. (2020); Rahim et al. (2023); Rasul et al. (2021); Shahroom & Hasan (2022)
HR Practices in Higher Education	Ismail et al. (2018); Othman et al. (2022); Ting et al. (2020)
Madani Framework and Educational Policies	Jaafar & Ismail (2021); Mohamad Rasul et al. (2022); MOHE (2019); Nordin et al. (2021)
University-Industry	Yusoff et al. (2020); Zain et al. (2023); Zaliza et al. (2022)

Collaboration	
Faculty Development and Continuous Learning	Tan et al. (2021); Yaacob et al. (2021); Zulfadli et al. (2021)
Graduate Employability and Economic Development	Khoo et al. (2022); Subramaniam & Khawaji (2022); World Bank (2021)

Table 3 is arranged thematically to categorize the 28 articles. The articles were first grouped into seven themes that include graduate employability skills and competencies, curriculum alignment and industry relevance, HR practices in higher education, Madani framework and educational policies, university-industry collaboration, faculty development and continuous learning, and graduate employability and economic development. This thematic arrangement allows for a more organized and thorough review and analysis of the related areas as well as the outcomes of applying HR approaches to enhancing graduate employability consistent with the vision of the Madani framework. The organization of articles with the various characteristics compassion to each theme enables the systematic review to undertake discussion on these areas based on the findings and major ideas, gaps, and recommendations derived from the process. This structured analysis style ensures that the systematic review provides a detailed and comprehensive exploration of the themes, enabling discussions and evidence.

The findings underscored the continuation problem of the skills gap between the competencies learned by graduates and the increasing demands of high-value industries with the context of the Forth Industrial Revolution(4IR) (Chang et al., 2021; Lim et al., 2020; Shahroom & Hasan, 2022). Specifically, the gap not only contributes to poor graduate employability but also prevents Malaysia from developing a high-skilled knowledge-based workforce (Khoo et al., 2022; World Bank, 2021). A solution to this issue requires reorienting higher education to develop industry-responsive skills such as critical thinking, problem-solving and technology literacy (Mukhtar et al., 2020; Rahman et al., 2021).

The review describes the important role HR practices play in enabling the curricular adjustment and implementation of industry-relevant competencies in graduates. Specifically, strategically designed HR interventions such as training programs and professional development for faculty, industry-aligned performance management systems, and recruitment efforts could facilitate educator's attainment of the knowledge and competences necessary to deliver the industry-relevant curricula (Ismail et al., 2018; Othman et al., 2022; Ting et al., 2020). In addition, HR practices that enable continuous learning and growth for both faculty and students could help increase their overall level of flexibility and readiness to respond to the ever-changing job market demands (Tan et al., 2021; Zulfadli et al., 2021).

To sum up, the articles have demonstrated the importance of the Madani Framework for shaping educational outcomes and developing a holistic, ethical, and socially responsible workforce (Jaafar & Ismail, 2021; Mohamad Rasul et al., 2022; Nordin et al., 2021). Specifically, all the articles call for integrating the principles of the Madani framework into HR practices, including recruitment, training, performance appraisal so that HEIs can develop graduates with not only technical competence but that also have in them sustainability literacy, ethical decision-making, and sense of social responsibility. Moreover, all the articles have emphasized the critical role of effective

university-industry collaboration in bolstering graduate employability (MOHE, 2019; Nordin et al., 2021). Therefore, HR practices that support knowledge and skills transfer, industry placement, and the collaborative design of academic programs could bridge the mismatch existing between academic curricular and industry needs (Yusoff et al., 2020; Zain et al., 2023; Zaliza et al., 2022).

Furthermore, these studies addressed the importance of continuous professional development and lifelong learning on the part of both teachers and students. Human resource practices that actively support mentorship initiatives, exposure to the industry, and skill-based developmental opportunities work to create a learning culture where graduates can keep up with the dynamic marketplace demands and thereby play their role in Malaysia's economy (Tan et al., 2021; Yaacob et al., 2021; Zulfadli et al., 2021). In conclusion, from the literature, it is evident that there is a need for a holistic and collaboration approach among key stakeholders, that is, policy-makers, educators, industry partners, and HR professionals (Ismail et al., 2018; Khoo et al., 2022; Ting et al., 2020). By combining their resources and areas of expertise, stakeholders can develop implementable strategies that bridge the gap between education and industry requirements, thereby enhancing graduates' employability and supporting Malaysia's drive towards an e-economy.

Discussion

The systematic review undertaken in the present study has provided key insights into the central importance of human resource spearheading practices in realizing the Madani Framework vision of comprehensive graduate employability adjustments in Malaysia's HE sectors. Through the synthesis and critical evaluation of the main findings of 28 relevant projects, a number of central themes and implications were identified, offering clarity into the requisite methods and strategies for narrowing the disconnect between educational attainment and industry appropriateness. The current discussion aims to elaborate the identified themes and thus develop a thorough comprehension of how HRM practices can aid in the fostering of a skillful, flexible, and socially aware workforce that is aligned with the nation's economic maturation agenda.

Objective 1: To Assess the alignment between the competencies fostered by current higher education curricula and the requirements of high-value industries in Malaysia.

In conclusion, assessing the congruence between higher education curricula and the competency requirements of high-value industries is a complex endeavor that necessitates taking several steps. These include curriculum mapping and gap analysis to determine the variances between the existing curricula and industry needs, stakeholder collaborations with employers and industry practitioners to familiarize with the unique competency requirements, labor market analysis and skill demand studies to determine the most sought-after skills and attributes within various sectors, incorporation of new technologies and Industry 4.0 skills into academic programs to ensure that students are prepared for the dynamic job market, and the development of a continuous review system for curricula updation. Through these strategies, higher education institutions enhance their ability to assess the congruence between their curricula and the competency requirements of high-value industries.

Subsequently, they can identify the areas needing improvement and understand how to bridge the gap to boost graduate employability.

Objective 2. Investigate the efficacy of existing HR practices within HEIs in cultivating industry-relevant skills and competencies among graduates.

Therefore, the systematic review identified several HR domains that need to be thoroughly assessed in order to adequately measure the efficacy of the existing HR practices implemented by the HEIs to cultivate industry-relevant skills and competencies among the graduates. First, the assessment of the faculties should measure the quality of the employment and training offered to the academic staff in a manner that enables educators to acquire the requisite knowledge and pedagogy perspectives appropriate to the industry-oriented curriculum. The second assessment domain includes the degree to which the performance management system and the performance evaluation criteria match the industry requirements and the degree to which the academic staff are motivated or rewarded for developing the industry relevant competencies in the students. Additionally, the systematic review indicated the importance of assessing the impact of the professional development and adjunct professional engagement in the form of workshops, seminars, and industrial projects and professional training on the knowledge and pedagogy behaviour of the faculty members. Conducting a thorough assessment of the above-mentioned HR domains will help HEIs recognize the strong points, the weaknesses, and the interventions to enhance weaknesses to cultivate industry-relevant skills and competencies among the graduates.

3. Explore the role of HR strategies in promoting and sustaining effective university-industry collaborations that support curriculum development and experiential learning opportunities.

According to this systematic review, HR strategies play a significant role in promoting sustainable university-industry collaborations. University-industry collaboration is essential for ensuring that the curriculum is aligned with industry trends and providing students with hands-on learning opportunities (Yusoff et al., 2020; Zain et al., 2023). As effective HR practices enable knowledge sharing between academia and the industry, HEIs can gain insight into the current and future needs of the industry, including emerging technologies and skills required (Khoo et al., 2022; Rahim et al., 2023). HR strategies can use this information to ensure that they offer industry-consistent course curricula and provide students with practical on-the-job learning experience from internships, industrial projects, and industrial seminars (Tan et al., 2021; Zaliza et al., 2022). When HR practices better develop the faculty members to expose them to the industry, they provide the professors with knowledge and career skills that can help them bridge the theory-practice gap (Ting et al., 2020). In addition, HR practices also ensure faculty members are compensated and rewarded for their contribution and involvement in industry partnerships to encourage continuous learning and knowledge-sharing culture.

4. Identify innovative HR practices that can be leveraged to embed the principles and values of the Madani Framework into higher education curricula, fostering a holistic and socially responsible workforce.

As such, the systematic review demonstrates the necessity of innovative HR practices that incorporate the principles and values of the Madani Framework in higher education to develop a holistic and socially responsible workforce. Among the identified approaches is the need to conduct recruitment and the selection process based

on desirable competencies and attributes outlined in the Madani Framework, including sustainability awareness, responsible decision-making, and basis in Islam values (Mohamad Rasul et al., 2022; Nordin et al., 2021). In addition, the review showed the need for faculty development programs that facilitate educators in gaining the required knowledge and developing a suitable mindset about embedding Madani values in their work and activities (Jaafar & Ismail, 2021; Zulfadli et al., 2021). It focuses the reviewed studies on integrating the principles of the Madani Framework into faculty performance and reward systems, which reflect the further incentive for faculty to contribute to the development of graduates with holistic responsibility goals. Furthermore, there are innovative HR practices the reviewed studies used to demonstrate how collaboration with sustainability experts, community activities, and industry partnerships help maintain learning experiences that improve Madani values reliance (Yusoff et al., 2020; Zain et al., 2023).

To summarize, the current systematic review accentuates the importance of HR practices in achieving the vision of the Madani Framework regarding graduate employability in Malaysia. Through the alignment of HR strategies with the requirements of the industry, the development of industry relevant competencies, the promotion of ethical and sustainable practices, the facilitation of university-industry relationships, and the creation of an environment conducive to lifelong learning, HEIs may equip graduates with skills, knowledge, and attributes that will enable them to succeed in industries that create high value and support the growth and development of nations both at economic and social levels.

Conclusion

In conclusion, a systematic review in this article has provided comprehensive analysis of the relationship between human resource practices and Malaysia higher education sector graduate employability vision through the Madani Framework. Using evidence from a variety of studies identified for synthesis, this review has outlined that HR strategies play a critical role in ensuring a close relationship between educational outcomes and industry requirements as a way of enhancing the short-term economic development of the country. Further, emphasis has been placed on the fact that there continues to be a significant concern regarding the continuous skills mismatch between the graduates and evolving high-value industries. As such, the solution involves creating systems interventions to ensure that some of the high-value industries are in a position to inform different HEI's focus on curricula to ensure university graduates have sustainability, ethics, and social responsibility principles in the Madani Framework to facilitate full-time employment.

The key recommendations emanating from this review include the initial conduction of curricular mapping and gap analyses and stakeholder collaboration with industry partners. Second, emerging technologies and Industry 4.0 skills should be integrated into academic programs, and commitments should be made to regular and ongoing review and updating mechanisms. In addition, an evaluation of the efficacy of the HR practices currently in place in HEIs, including faculty recruitment, training, performance management, and continuous professional development, should be carried out. The importance of HR strategies in supporting and sustaining effective

University-Industry Collaboration, which is essential for creating the right environment for experiential learning, as well as curriculum success for industry-relevant skills, has been highlighted in this review. In addition, innovative HR practices centered on the priorities outlined in Islamic societal values can nurture a more balanced and responsible workforce. For instance, aligning the competencies of the Madani Framework to recruitment procedures, these principles can be embedded into on-going faculty development, performance review procedures to assess implementation incentives.

In conclusion, this systematic review has revealed that the full realization of the vision of the Madani Framework is wholly dependent on an extensive and collaborative approach between policymakers, educators, industry partners, and HR professionals. By combining their contributions, HEIs can develop and implement long-term and sustainable strategies that close the gap between higher education outcomes and the industry's needs to improve graduate employability and support Malaysia's shift to a knowledge economy. As Malaysia continues to navigate the complexities of the Fourth Industrial Revolution and the rise of high-value industries, this review and the recommendations presented therein offer a comprehensive guide for policymakers, educators, and HR practitioners to maximize the strategic value of HR practices in building a skilled, adaptive, and socially responsible workforce to ensure the country's economic transformation and sustainable development.

Recommendations

To fill the gap between the outcomes of education and what the industry requires, and consequently, improve the employability of graduates in Malaysia, a comprehensive and collaborative strategy by all stakeholders is recommended. At the national level, therefore, a taskforce or an advisory committee to develop and review the strategies for aligning HR practices to the Madani Framework and the industry requirements should be established. Labor market analyses and regular professorial works will maintain regular and constant collaboration with the industries and continuous exchange and improvement of knowledge and other aspects. The recruitment process, promotion, and reward systems within the HEIs should be guided by the competences and values outlined in the Madani Framework. Amid rapidly emerging trends and disruptions due to technology, there should be a near constant workshop and knowledge-sharing –industry collaboration and engagement. Innovative HRM activities – including cross functional works, community engagements, and sustainability-tailored activities – can reinforce the Inci framework. Additionally, developing and regular reviewing policies through research and evaluation can identify best practices as well as ensure the HR strategic direction relevance to the needs of the industries and the country's development agenda. A collaborative effort by all stakeholders can achieve this vision outlined in the Madani Framework, improve the graduates' employability, and facilitate Malaysia's transformation into an ethnographic economy.

Acknowledgements

We would like to express a deepest gratitude to the National Defence University of Malaysia (UPNM) for their

invaluable support and contributions to this research project. This study would not have been possible without the assistance and resources provided by UPNM.

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