

FUTURE-READY TALENT DEVELOPMENT: A PROPOSED CONCEPTUAL FRAMEWORK ADDRESSING GRADUATE UNEMPLOYMENT IN MALAYSIA

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Abstract: *The development of future-ready talent has emerged as a critical topic in the globalised era due to a mismatch between graduate skills and industry requirements. This article highlights the necessity of cultivating future-ready talent to address graduate unemployment in Malaysia. Anchored in the Resource-Based View (RBV) theory, this study proposes a conceptual framework that incorporates key drivers such as the green economy, technological advancements, technological disruptions, and globalisation. It highlights the importance of collaborative efforts among Higher Education Institutions (HEIs), industries, and policymakers in bridging the gap between the supply and demand for skilled talent. Employing conceptual analysis, this study synthesises existing literature and reports to develop the proposed framework. The anticipated outcomes include improved graduate employability and enhanced workforce resilience in Malaysia, equipping it to meet the evolving demands of the labour market.*

Keywords: *Talent development, green economy, technological advancement, technological disruption, globalisation*

Introduction

The concept of future-ready talent has become increasingly significant in the context of globalisation. It refers to individuals equipped with the requisite skills, adaptability, and mindset to navigate uncertain and challenging work environments (Mahapatra & Dash, 2022; Pretti et al., 2021). Several pressing issues necessitate the development of future-ready talent, including the misalignment between industry demands and the existing talent pool, employers' concerns about accessing such talent, and persistent unemployment rates.

Reports from the World Economic Forum (2023) and Mercer (2024) indicate that employers are increasingly concerned about the availability of future-ready talent. While employers perceive gaps in workforce capabilities to address emerging challenges, students and educators grapple with understanding the specific skills required to tackle these issues effectively. Skills-related underemployment has become more prominent, with graduates struggling to secure roles that align with their qualifications. According to the 2023 statistics from the Centre for Future Labour Market Studies (EU-ERA), approximately 90,000 graduates in Malaysia are unemployed. This unemployment is primarily attributed to structural and frictional factors. Furthermore, a 2024 survey conducted by Malaysia's Ministry of Education (MOE) identified a lack of the skills, knowledge, and attitudes sought by employers as a key contributor to graduate unemployment.

As reported by Lawrence (2024), industries such as engineering, science, accounting, and financial analysis in Malaysia exhibit high saturation, with limited vacancies often filled by graduates from top-tier local and foreign universities. Meanwhile, labour-intensive sectors such as food farming, agriculture, fisheries, construction, and low-end manufacturing continue to face a surplus of vacancies, predominantly filled by imported labour (Lawrence, 2024). This mismatch underscores the need for strategies that address both oversaturation in certain sectors and underutilization of local talent in other sectors.

Addressing these challenges requires organisations to adapt their talent development strategies to align with the rapidly changing labour market. The Malaysian government has recognised this issue, as reflected in the Half-Term Review of the Twelfth Malaysia Plan 2023, where future talent development is emphasised as a key enabler under Theme 3: Advancing Sustainability. The plan highlights the importance of realigning the labour market through higher employee compensation, increased labour participation, and a strengthened labour market support system.

The Sustainable Development Goals (SDGs) provide a global framework for fostering prosperity, environmental protection, and social well-being, ensuring a sustainable future for all. Originating from the United Nations in 2015, the SDGs comprise 17 goals and 169 targets, building upon the earlier Millennium Development Goals. These ambitious and transformative objectives envision a world free from poverty and hunger, fostering thriving societies, non-violence, equality, sustainable consumption, and environmental preservation (United Nations, 2015). United Nations' SDGs,

This study aligns with SDG 8 (Decent Work and Economic Growth), as it emphasizes creating a workforce matching the market demands while fostering sustainable economic development. Additionally, SDG 9 (Industry, Innovation, and Infrastructure) aligns with this study's focus on equipping talent with technological and innovative skills to meet the demands of evolving industries. SDG 16 (Peace, Justice, and Strong Institutions) is also considered to highlight the

importance of fostering inclusive and robust institutions to address challenges such as workplace inequalities. Considering these interrelated SDGs will ensure a comprehensive approach in addressing current study's objective of developing a comprehensive framework for future-ready talent in Malaysia.

Developing future-ready talent necessitates collaboration among multiple stakeholders. The education and training sectors, HEIs, and industries must play pivotal roles in addressing these issues. HEIs are responsible for producing skilled labour (supply side), while industries absorb this talent (demand side). Effective communication and information-sharing mechanisms are vital for aligning expectations and requirements between these stakeholders. While graduate employability has been extensively studied (Ahmad Tajuddin et al., 2022; Kamaruddin et al., 2020; Mohamad et al., 2024), there is limited integration of factors such as the green economy, technological disruption, and globalization into one framework. This study addresses this gap by proposing a novel, comprehensive conceptual framework that synthesizes these drivers with the principles of the Resource-Based View (RBV) theory.

This study proposes a conceptual framework for developing future-ready talent as a means of reducing graduate unemployment in Malaysia. The subsequent sections review the relevant literature, beginning with the Resource-Based View theory as the underpinning framework. The discussion then focuses on the drivers of green economy, technological advancements, technological disruptions, and globalisation, which collectively form the proposed framework. The article concludes with an exploration of expected outcomes and recommendations for future research.

Literature Review

Resource-Based View Theory

The Resource-Based View (RBV) theory underpins this research by emphasising the importance of internal resources in fostering future-ready talent. Rather than focusing solely on external competition and market dynamics to gain a competitive edge, RBV advocates for leveraging internal organisational resources and potential. According to the theory, resources that are valuable, rare, inimitable, and organised (VRIO) are key to achieving a sustainable competitive advantage. This perspective supports the development of inclusive talent strategies over exclusive talent initiatives (Ambrosius, 2018; Crane & Hartwell, 2019; Kabwe & Okorie, 2019; Manuel Maqueira, Moyano-Fuentes, & Bruque, 2019). Effective management of internal human capital is thus crucial for long-term competitiveness, thereby aligning with the objectives of SDGs 8,9, and 16.

By leveraging internal resources such as talent, Malaysia can enhance workforce employability, thereby aligning with SDG 8's focus on job creation and economic sustainability. In relation to SDG 9, the RBV provides insights into how organizations can leverage their internal capabilities to drive innovation. For instance, a study by Zhang & Liu (2022) emphasizes the role of a talent ecosystem in enhancing firm innovation performance (Zhang & Liu, 2022). The application of RBV in this context encourages organizations to improve talent management practices with innovation that can lead to the development of new products and services, thereby enhancing their competitiveness. RBV also provides insights that align with SDG 16, which emphasizes the importance of promoting peaceful and inclusive societies, providing access to justice for all, and building effective, accountable institutions. The RBV can inform the development of a talent framework by emphasizing the need for ethical leadership and

governance practices. This is supported by Reinert & Debebe (2022) who studied ethical dimensions of talent development are crucial for fostering trust and accountability within organizations (Reinert & Debebe, 2023). By cultivating a culture of integrity and ethical behavior, organizations can enhance their institutional frameworks, thereby contributing to the goals of SDG 16.

RBV offers a robust framework for identifying strategies critical to developing future-ready talent. By treating human capital as a strategic resource, organisations can strengthen their competitive advantage and ensure sustainability. The integration of the RBV theory with the SDGs 8, 9, and 16 provides a comprehensive framework for developing a future-ready talent framework. This study's proposed framework integrates RBV principles with a focus on sustainability (green economy), technological competencies, and global adaptability. The framework prioritizes developing talent equipped to meet the demands of the green economy and the digital landscape (Kang et al., 2022; Tsironis, 2023).

Green Economy

The green economy represents an economic model designed to promote human well-being while minimizing environmental risks (Bailey & Caprotti, 2014). Transitioning to a green economy requires a workforce skilled in sustainable practices. As industries adopt initiatives such as low-carbon logistics and sustainable supply chains, there is a rising demand for talent capable of adapting to these transformations (Wang et al., 2023).

Moreover, the integration of green skills into talent development frameworks is essential for fostering a workforce capable of addressing the challenges posed by climate change and resource depletion. Tjahjadi et al. emphasize that green human capital readiness is crucial for improving business performance in the context of a green economy, suggesting that organizations must cultivate talent that is not only technically proficient but also environmentally conscious (Tjahjadi et al., 2023).

This trend is reinforced by the World Economic Forum (2022), which reports a growing demand for green skills. In the United States alone, the number of jobs in renewables and environmental sectors has more than tripled within five years (LinkedIn, 2022). However, the supply of green talent has not kept pace with demand. While green job postings have grown by 8% annually over the past five years, the share of green talent has only increased by 6% per year. To address this gap, businesses need to invest in workforce training and skill enhancement programmes, while workers should consider pursuing green careers to boost their employability and continuously upgrade their skills.

Technological Advancement

Technological advancements are a critical driver of demand for future-ready talent. The rapid pace of technological change necessitates a workforce with both practical expertise and innovative capabilities (Xiang et al., 2023). The ongoing digital transformation affects all types of activities, including business operations and societal interactions (Morakanyane, O'Reilly, McAvoy, & Grace, 2020). This transformation challenges organisations worldwide, not only in their internal processes but also in adapting to increasingly digital environments. It requires significant changes in organisational behaviour, corporate culture, talent recruitment, and leadership strategies (Kane, Palmer, & Phillips, 2017).

As technology continues to evolve, it reshapes the skills and competencies required in the labor market. A study discussed the concept of a "technology fitness landscape," where innovations in technology can be viewed as positive mutations that enhance performance across various domains (Jiang & Luo, 2021). This implies the importance of aligning talent development strategies with the latest technological trends to ensure that the workforce remains competitive and capable of utilizing new technologies.

Digital transformation often involves modifying or adapting existing business models (Kotarbe, 2018). While technology adoption is critical, the success of technological advancements largely depends on effective talent management. Past studies highlight talent management as a decisive factor in digital transformation, explaining why some organisations struggle with its implementation (Frankiewicz & Chamorro-Premuzic, 2020). Ineffective talent management can lead to skill gaps, resistance to change, and organisational inefficiencies. Conversely, organisations that invest in upskilling their workforce are better positioned to gain a competitive advantage.

Technological Disruption

Technological disruption has significantly accelerated the need for workforce reskilling. The World Economic Forum (2023) predicts that by 2025, 50% of employees will require reskilling due to the integration of new technologies. Organisations must prioritise adaptability to maintain competitiveness in fast-changing markets (Handayani et al., 2020). Automation and artificial intelligence (AI) are projected to create 12 million more jobs than they displace by 2025, highlighting the need for a paradigm shift in career development to foster a highly skilled and adaptable workforce.

Evidently, the rapid pace of technological advancements, particularly in artificial intelligence, and machine learning necessitates a workforce that is adaptable and skilled in emerging technologies. A study by Leskina discusses the importance of digital talent management in fostering human capital development, emphasizing that organizations must develop a workforce capable of navigating the path of the digital economy (Leskina et al., 2022). This involves not only technical training but also fostering soft skills such as creativity, and problem-solving, which are essential in a technology-driven landscape.

Many nations face challenges in equipping their workforce with the skills needed to thrive in an environment dominated by automation and robotics. Chen et al. (2019) emphasized the importance of middle-skilled workers developing sustainable career strategies amidst technological disruption. Establishing innovative frameworks that integrate digital literacy is crucial for preparing future-ready talent, particularly in sectors like hospitality and tourism (Adeyinka-Ojo et al., 2020)

Globalisation

Globalisation has transformed talent development worldwide, necessitating a reevaluation of education systems. Higher education institutions (HEIs) must take proactive measures to adapt their curricula to meet the evolving demands of the global market (Leikuma-Rimicane et al., 2022). This may include promoting critical thinking and incorporating technological literacy into learning programs. Similarly, Zhang and Cang (2023) highlight the increasing importance of HEIs in cultivating future-ready talent by aligning educational offerings with the need of a rapidly changing job market. This alignment involves fostering soft skills such as adaptability and cross-cultural communication (TOMČÍKOVÁ, 2020).

Moreover, globalisation has led to increased competition for talent, as organizations seek to attract and retain skilled individuals. This competition necessitates the development of robust talent management strategies that prioritize continuous learning and professional development. According to Dalal & Akdere (2018), the challenges posed by globalization, including talent shortages and the need for strategic talent management, highlight the importance of investing in talent development initiatives (Dalal & Akdere, 2018).

Globalisation provides Malaysian businesses with access to new markets and opportunities but also intensifies competition. To address this, talent development must prioritise skills that meet global standards. Revising educational curricula to align with international benchmarks and fostering collaborations between educational institutions and industries can help Malaysia build a talent pool that meets the demands of a globalised economy.

Research Methodology

The conceptual framework proposed the key drivers of future-ready talent development including green economy, technological advancement, technological disruption, and globalisation. The inclusion criteria include existing research related to future-ready talent, graduate employability, and talent development. Studies that were not related to future-ready talent and talent development were therefore excluded. To ensure a comprehensive understanding of the subject, multiple databases such as Scopus, Web of Science, Google Scholar, and university libraries were also consulted. Empirical studies published between 2014 and 2024, with quantitative or mixed-method research designs were prioritized, while purely theoretical or opinion articles were excluded.

Proposed Conceptual Framework

The proposed conceptual framework is illustrated in Figure 1 below, identifying the green economy, technological advancement, technological disruption, and globalisation as pivotal drivers of future-ready talent development.

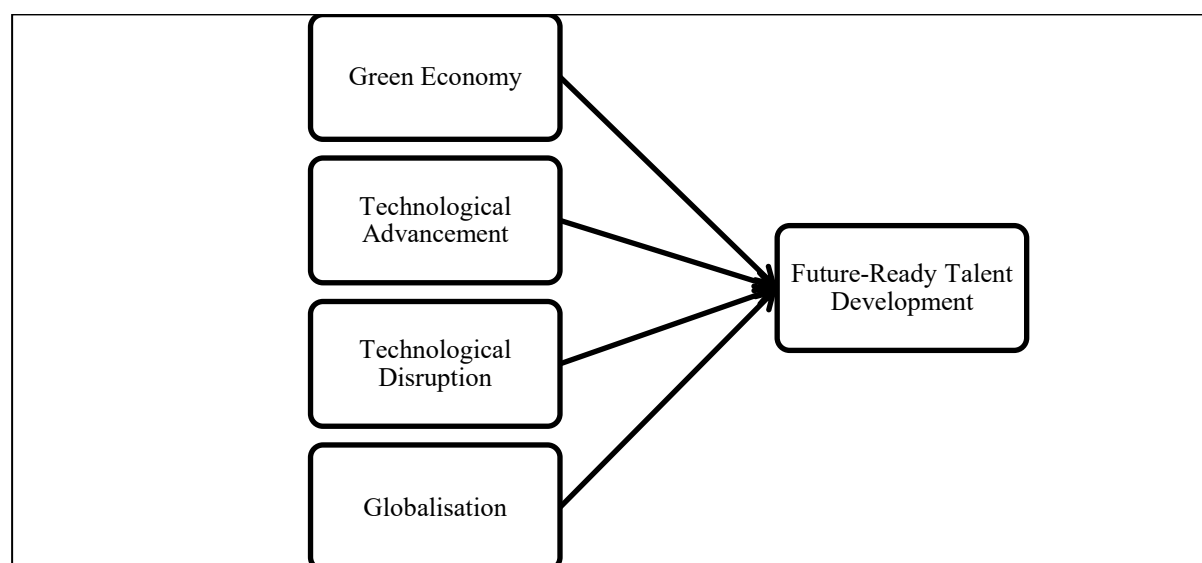


Figure 1: Proposed conceptual framework for Future-Ready Talent Development

Source: Developed by Researcher for Current Study

This study is underpinned by the Resource-Based View Theory, which supports the framework for cultivating future-ready talent. Additionally, extensive literature highlights the significance of equipping the workforce to address challenges posed by technological advancements and globalisation. Integrating the theoretical foundation with a comprehensive literature review, this study presents a framework to examine the relationships among the green economy, technological advancement, technological disruption, and globalisation in fostering future-ready talent.

The variable of green economy highlights the need for talents with green skills, making them more competitive, meeting the global shift towards sustainability, as well as contributing to Malaysia's commitment to under SDGs 8 and 9. Meanwhile, the variable technological advancement bridges the gap between graduate capabilities and industry requirements, reducing skills mismatch and combatting unemployment of graduates in Malaysia. This variable of technological disruption highlights the importance of preparing graduates to thrive in sectors impacted by automation, ensuring resilience in the face of disruption. Last but not least, the variable of globalization highlights the need for Malaysian graduates to meet international standards so that they are more competitive in the global job market.

These variables provide a robust foundation for addressing Malaysia's graduate unemployment challenges. By aligning talent development initiatives with these drivers, the framework ensures that graduates are equipped to meet the demands of an evolving labor market.

Direction for Future Research

The present study proposes a framework for future-ready talent development, focusing on critical elements such as the green economy, technological advancements, technological disruptions, and globalisation to address talent-related challenges in Malaysia, particularly graduate unemployment. However, several areas warrant further exploration. For instance, empirical research employing quantitative or mixed-method approaches is essential to evaluate and validate the framework's effectiveness.

Future studies could also explore the framework's applicability across various sectors and regions within Malaysia, offering insights into its adaptability. Assessing its relevance in industries like manufacturing, services, and agriculture would help uncover sector-specific challenges and opportunities. Similarly, examining the framework's inclusivity by testing it in both urban and rural settings would ensure broader applicability.

Comparative research between Malaysia and countries with successful talent development initiatives could provide valuable insights into best practices. For example, analysing nations with advanced digital technology programmes that have effectively addressed graduate unemployment may inform Malaysia's policies. Addressing these areas in future research will contribute to the implementation of the proposed framework, ensuring its validity and practicality in overcoming challenges associated with future-ready talent development.

Conclusion

Developing future-ready talent is crucial for mitigating the escalating graduate unemployment rate in Malaysia. This article highlights the importance of the Resource-Based View Theory as the foundation of the proposed conceptual framework, emphasising collaboration among key stakeholders. The integration of RBV theory and SDGs provides a unified foundation for analyzing how internal resources, such as human capital, can be leveraged to meet the demands

of industries impacted by technological disruptions and global trends. By aligning talent development strategies with emerging trends such as the green economy, technological advancements, technological disruptions, and globalisation, Malaysia can prepare its graduates to excel in an evolving job market.

Future-ready talent development initiatives are anticipated to benefit the government, academia, and industry stakeholders, reinforcing Malaysia's aspirations toward becoming a high-income nation. These efforts align with the vision of *Ekonomi MADANI: Memperkasa Rakyat* and the 2030 Agenda for Sustainable Development. Specifically, they contribute to the MADANI Economy's "Future-Ready Talent" pillar and support MySTIE's educational objectives as a socioeconomic driver. Graduates equipped to meet industry demands will also advance the achievement of SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 16 (Peace, Justice, and Strong Institutions).

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