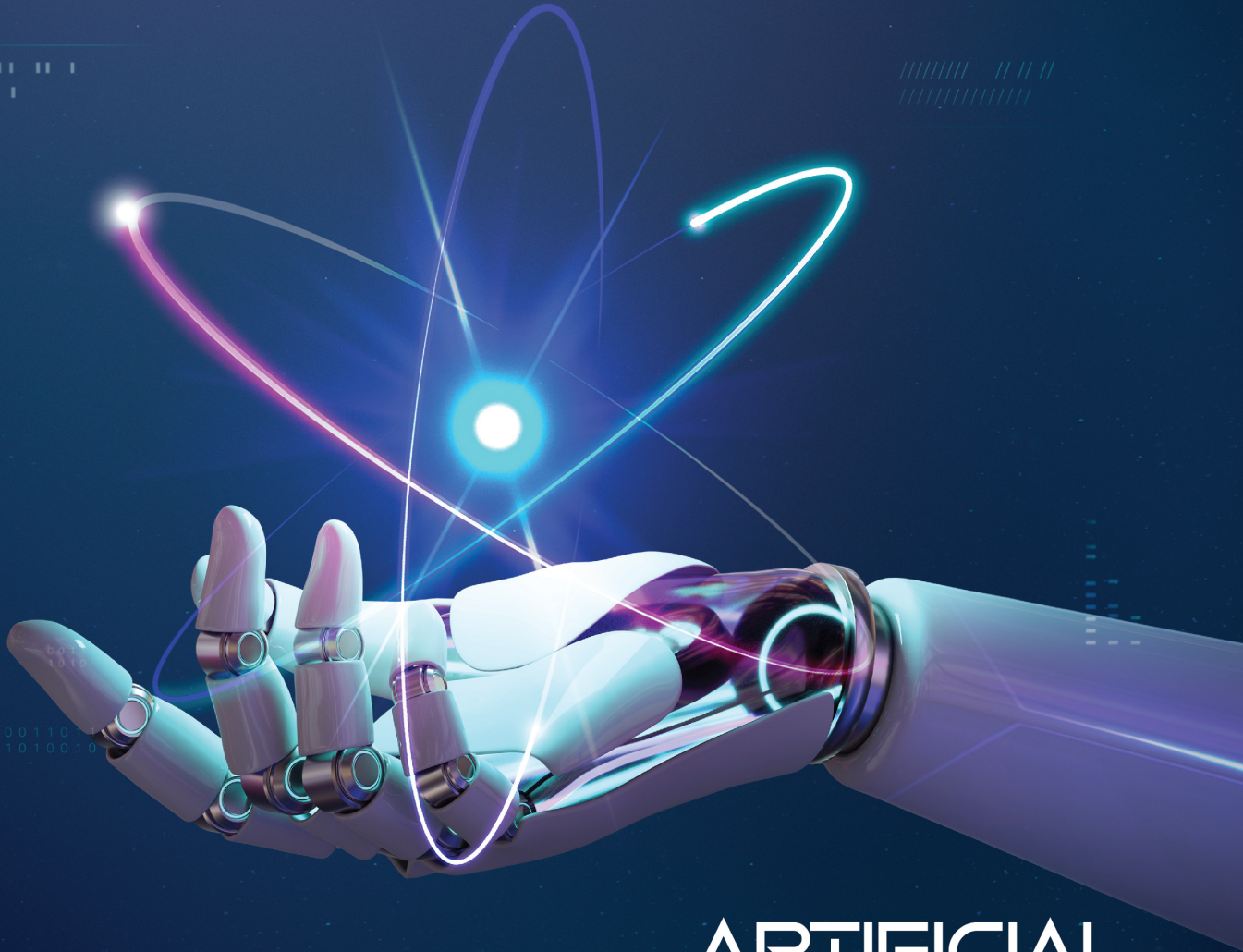


RISE

Catalysing Global Research Excellence



ARTIFICIAL
INTELLIGENCE (AI):
Embracing the Future

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ABOUT THE MAGAZINE

RISE Magazine is published by Office of the Deputy Vice-Chancellor (Research and Innovation) with aims to highlight a research and innovation on multidisciplinary expert of fields in UiTM. It serves as a platform for researcher to showcase their high quality and impactful findings, activities and innovative solution through publication. Contribution of these ideas come from academicians, researchers, graduates and universities professionals who will enhance the visibility of research and stride to elevate Universiti Teknologi MARA to global standards. This is an effort to promote research as a culture that is accepted by all expertise.

ABOUT UiTM

Universiti Teknologi MARA (UiTM) is a public university based primarily in Shah Alam, Malaysia. It has grown into the largest institution of higher education in Malaysia as measured by physical infrastructure, faculty and staff, and student enrollment. UiTM is the largest public university in Malaysia with numerous campuses throughout all 13 states in Malaysia. There is a mixture of research, coursework and programmes offered to the students. The Office of the Deputy Vice-Chancellor (Research and Innovation) also known as PTNCPI (*Pejabat Timbalan Naib Canselor (Penyelidikan dan Inovasi)*) serves as a *Pusat Tanggungjawab* (PTJ) for navigating the research and innovation agenda of the university to achieve UiTM's goals. The PTNCPI office strives to mobilize faculty and campuses, fostering collaboration among researchers, with the aim of transforming the University into a Globally Renowned University by 2025

Streamlining Education Processes:

Lean Management Practices in Malaysian Institutions

The education sector plays a crucial role in shaping the future of a country. In Malaysia, the government has consistently prioritized education since the nation's independence. In the latest budget, Prime Minister Datuk Seri Anwar Ibrahim allocated RM 55.2 billion, the largest amount, to education in 2023. This substantial allocation reflects the government's strong commitment to the development of the education sector.

Nevertheless, incorporating lean management practices in education can be challenging as it requires a shift in mindset and culture. Lean management focuses on eliminating waste and continuously improving processes, which may clash with traditional educational structures and practices. Additionally, the data-driven decision-making approach emphasized by lean management might not align with the subjective evaluation methods often used in educational institutions. Despite these obstacles, several universities have managed to implement lean management principles successfully, leading to enhanced efficiency and effectiveness.

To successfully implement lean management in education, a primary focus should be on waste reduction. Educational institutions, such as schools and universities, often generate substantial amounts of paper waste through activities like exams and applications. In Malaysia, universities alone produce approximately 70,000 tons of waste annually, much of which could be recycled. One effective approach to minimize paper and recyclable waste is by digitizing traditional processes. Memos, application forms, and documents can be converted into digital formats, and an efficient system can be established to streamline the process while fostering a culture of change within the organization. Additionally, implementing a ban on single-use plastics on campus could significantly reduce waste and propel the institution towards a more sustainable future.

Lean management involves a continuous improvement process, where small changes are made over time to achieve better outcomes. In the context of education, this entails regularly assessing student learning and instructional practices while providing ongoing professional development for teachers and staff. The Covid-19 pandemic has accelerated digital transformation in Malaysia, leading many universities to adopt blended learning and digital assessment using tools like Learning

The Ministry of Higher Education recently introduced the 2u2i academic program as a vital component of the Malaysia Education Development Plan 2015-2025. This innovative program integrates academic learning with real-world application in the workplace, offering students invaluable hands-on experience. Several esteemed universities in Malaysia, such as Universiti Malaysia Kelantan (UMK), Universiti Teknikal Malaysia Melaka (UTeM), and Universiti Tun Hussein Onn Malaysia (UTHM), have successfully adopted this approach. Many other universities in Malaysia are now following suit, recognizing the potential of this program to provide students with maximum industry exposure and enhance their readiness for the dynamic job market. This initiative signifies a major step towards creating a more practical and industry-relevant education system in the country.

Lean management in education hinges on data-driven decision-making, especially when evaluating student learning, instructional practices, and the effectiveness of school programs. The strategic use of data empowers schools to make well-informed choices regarding resource allocation and improvements in student outcomes. An exemplary implementation of this approach is through Integrated Outcome Based Education (IOBE), which assesses the competency and effectiveness of teaching and learning deliveries. By adopting IOBE, universities can assess the quality of teaching and learning provided by lecturers, thereby ensuring the maintenance of delivery excellence and robust quality assurance within the organization. This data-driven approach fosters a culture of continuous improvement and helps institutions align their efforts with student success and industry demands.

In conclusion, lean management practices hold the potential to revolutionize the education sector in Malaysia by focusing on waste reduction, delivering value to students, and enhancing educational quality. While challenges may arise during implementation, many universities in Malaysia have already embraced these principles, yielding positive outcomes. Leveraging digital tools and resources like Learning Management systems, blended learning, and Augmented Reality and Virtual Reality technology enables educational institutions to provide a more immersive and effective learning experience. Furthermore, involving industry players in curriculum design and development better equips students for the job market. Ultimately, the adoption of lean management practices empowers Malaysian universities to offer a higher quality of education that adequately prepares students for successful future careers.

Management systems. To enhance student experiences, some universities have also integrated Augmented Reality and Virtual Reality technology into their teaching and learning activities. The Ministry of Higher Education reports that approximately 63% of universities in Malaysia have implemented some form of blended learning due to pandemic-related restrictions on accessing university facilities and laboratories.

Lean management places great emphasis on delivering value to customers, which, in the context of education, translates to providing students with a high-quality education that equips them for successful careers. However, some universities in Malaysia have received feedback from industries indicating that their graduates lack job-ready skills, revealing a disconnect between academic programs and industry demands. To address this issue, certain universities have taken steps to involve industry players in curriculum design and development. They have also invited industry experts to deliver lectures and share their experiences, thereby providing students with better exposure to real-world industry practices. These collaborative efforts aim to bridge the gap between academic learning and industry requirements, ensuring that graduates are better prepared for the job market.



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