EDITORIAL

4IR, 5IR, Society 5.0, and Values in Education

The Fourth Industrial Revolution (4IR) has held the attention of the world for a long time. The term was first introduced in 2016 by Klaus Schwab, Executive Chairman of the World Economic Forum (Industrial Analytics Platform, retrieved from https://iap.unido.org/articles/what-fourth-industrial-revolution). 4IR represents technological advancement that has rapidly changed industries, economies and social realities with the introduction of smart automation, machine-to-machine communication and the internet of things. With the further expansion of artificial intelligence (AI) and chatbots like ChatGPT, digital technology has unmistakably made itself indispensable to mankind at all levels.

While some parts of the world are still mesmerized by IR4.0, others are now moving towards IR5.0 – centering on humans working alongside smart machines. According to the European Commission, IR5.0 adopts a human-centric approach that is complemented by IR4.0 (European Commission, retrieved from https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/industry-50_en). This concept is very similar to Japan's Society 5.0, which is Japan's blueprint for "*a human-centred society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space*" (Cabinet Office, Government of Japan retrieved from https://www8.cao.go.jp/cstp/english/society5_0/index.html).

Japan in Prime Minister Shinzo Abe's economic reform beginning 2013, introduced Society 5.0 in 2017, as a strategy to completely transform Japan into a "super-smart society" that integrates cyberspace and the physical space for a sustainable and inclusive socio-economic system that is powered by digital technologies of IR4.0 (UNESCO retrieved from https://www.unesco.org/en/articles/japan-pushing-ahead-society-50-overcome-chronic-social-challenges). This shift focuses on harnessing technology made possible through IR4.0 to make human life more comfortable and sustainable, as well as resolving societal challenges such as issues related to a large aging society, energy and environmental sustainability (Cabinet Office, Government of Japan retrieved from https://www.cao.go.jp/index-e.html). It is a form of reform that aims to achieve better solutions to human life and social challenges by incorporating advances in technology and innovations of IR 4.0 into industry and social life (Cabinet Office, Government of Japan retrieved from https://www8.cao.go.jp/cstp/english/society5_0/index.html).

The use of digital technology for human communication is addressed in two papers in this June issue. This is evidence of how much we have embraced digital technology in academia. It is also clear that issues related to how technology has been used to facilitate human activity remain the focus in education, in general.

Although the role of technology in facilitating human activity can no longer be denied, it is important that ethical and governance boundaries upon which technology can be used be clearly established. Recently, there have been concerns about the exponential growth of artificial intelligence. An open letter calling for an immediate pause for the training of AI systems has been made as it is felt by many leading technocrats that AI systems with "human-competitive intelligence" can pose serious risks to mankind.

This resonates with the concern raised by Dzulkifli Abd Razak, in his speech, entitled, "Fourth Industrial Revolution: The Leadership Dilemma", in which he highlighted that although *"renowned scientists have repeatedly warned of the potential dark side of artificial intelligence"*, it is difficult for leaders to resist its allure, when *"a lot of things are measured by dollars and cents"* (https://rsog.com.my/fourth-industrial-evolution-the-leadership-dilemma/). Dzulkifli Abd Razak was reported to further said, *"Going forward, leaders are expected to equip themselves with self-awareness, curiosity and empathy skills as they can expect more unprecedented things to take place given the trends exhibited in 4IR so far…Wisdom and spirituality elements should anchor the resolve of leaders"* (https://rsog.com.my/fourth-industrial-evolution-the-leadership-dilemma/).

Hence, topics that are important in education right now would relate to how future leaders, teachers and students can equip themselves with the right values, knowledge, and practices to navigate the uncertain future. Some of these topics, in relation to the provision of quality education and human development, are brought to the forefront in this June issue.

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