

# Incorporating Sustainable Education in the Undergraduate Curriculum: The Experience of a Young University in Singapore

By Intan Azura Mokhtar<sup>1</sup>, Ethan Yih Tng Chong<sup>2</sup>, & Steve Kardinal Jusuf<sup>3</sup>

## ABSTRACT

In recent years, learning about sustainable development and sustainability has become an increasingly significant component in universities' degree programs and curricula. As the world races to achieve the 17 United Nations' sustainable development goals (SDGs) by the year 2030 and abide by the framework proposed by the Paris Agreement ratified in 2015, our educational landscapes have simultaneously evolved. In universities, lessons in and opportunities for sustainable development and sustainability have redefined the university curricula and set the trajectory for our young people to take the lead in co-creating solutions for a better world. In this paper, background information of Singapore, a small city-state in Southeast Asia, is first presented, against the backdrop of how the nation's national constraints that are aligned to the UN SDGs have shaped its national agenda and national education, including its higher education landscape. This is followed by a brief discourse of curriculum initiatives that revolved around themes of sustainable development and sustainability in a young university in Singapore. These initiatives and projects were driven by the desire to provide a university education that is relevant and able to address current local, regional, and global demands, and carried out with interdisciplinarity and sustainability as beacons.

*Keywords: higher education; Singapore; sustainable development; sustainability; undergraduate education.*

## 1. Introduction

Singapore is a young and small city-state in Southeast Asia, located one degree north of the equator, at the southern tip of peninsular Malaysia. With a multi-racial and multi-religious population of less than 6 million people, living in a land mass of less than 730 square kilometers, and with no natural resources other than human resources, Singapore is a nation with a myriad of challenges. These challenges range from energy resources and food security to the provision of proper sanitation, access to clean drinking water, and quality education as well as employment for the people – its only resource. As a matter of fact, each of the 17 United Nations' Sustainable Development Goals (UN SDGs) is a persistent challenge for this small city-state. In this paper, a brief background on how Singapore has attempted to address these challenges through the national agenda and national education is presented. This is followed by an overview of the higher education sector in Singapore, focusing on one specific public-funded autonomous university and its efforts and experience in integrating sustainable development and sustainability education in its curriculum. The paper concludes with lessons learned from

<sup>1</sup>Singapore Institute of Technology

<sup>2</sup>Singapore Institute of Technology

<sup>3</sup>Singapore Institute of Technology

this experience and plans in entrenching sustainable development and sustainability education in higher education in Singapore.

## **2. Background on Singapore**

As a small city-state island situated off the equator, Singapore has no mountains or glaciers, or underground water sources or springs, that can provide potable or drinking water. Hence, through extensive government planning, judicious allocation of government budget, and ongoing bilateral ties with Malaysia, the country has to depend on its 4 national taps for potable water – (i) collection of rainwater through a network of drains and canals that channel rainwater to the country's 17 reservoirs; (ii) purchase of drinking water from the state of Johor in Malaysia through its prior water agreement that lasts until 2061; (iii) desalination of seawater in the country's 5 desalination plants; and (iv) treatment of reclaimed or gray water into what is known as NEWater, in the country's 5 NEWater treatment plants (Public Utilities Board, 2022).

Another challenge that Singapore faces is energy availability and production. With no naturally available fossil fuels, Singapore set out to not just import oil and gas, but to carry out value-added services in the petroleum and petrochemical industries to ensure the sustainability of her oil and gas trade. This is done through the processing of crude oil in three of its major refineries located on three of its 61 offshore islands (International Trade Administration, US Department of Commerce, 2022). As a result, Singapore has managed to boost its oil refining capacity to twice its petroleum and petrochemical product consumption. With enduring business and physical infrastructure, a skilled workforce, a strong intellectual property protection regime, transparent legal and taxation systems, and extensive bilateral free trade agreements with many countries, Singapore has established itself as one of the top three global oil trading and refining hubs. Nevertheless, Singapore also recognizes the limitations of fossil-based energy production and use and has made the progressive transition to renewable energy sources since 2020, tapping mainly on solar energy (Energy Tracker Asia, 2022). However, again due to limited land area, Singapore is not able to set up enough photovoltaic or solar panels to generate sufficient energy for its domestic consumption, with solar energy accounting for less than 0.1% of its domestic energy consumption. Other renewable energy sources such as wind, hydroelectric, tidal, or geothermal are non-available options for Singapore.

Yet another challenge Singapore faces is food availability and production. Due to land scarcity, there are competing land use needs in the country, with only 1% of its land mass available for agriculture or food production (Singapore Food Agency, 2021). Singapore imports more than 90% of food consumed in the country, growing the remaining 10% on its 1% of land available for food farming. With an ambitious food security and sustainability national plan known as “30 by 30”, Singapore has set in motion and implemented various initiatives to increase its domestic food production to 30% of local consumption needs by the year 2030. Among these initiatives is the high-tech agricultural sector in the north-western part of the city-state, incorporating vertical farms and non-soil agriculture, as well as an integrated infrastructure to support productive, sustainable farming and shared farming facilities, enabled by modern agricultural technologies, techniques, and tools. In addition, aquaculture or fish farming is another initiative to boost

the country's food security. Part of the north-western and southern coastal waters are used for floating fish farms, which can support only up to 10% of local fish consumption (Singapore Food Agency, 2022).

With such land scarcity to support a population of about 6 million people, every square meter of land in Singapore must be planned and accounted for. The Singapore land use master plan is a long-term plan for land use in the city-state, taking into consideration the country's various economic, social, and environmental needs (Urban Redevelopment Authority, 2022). The master plan provides broad strategies to identify land for different infrastructural development such as roads and other transportation and accessibility needs, schools, residential estates, commercial land use, as well as green space planning, in keeping with Singapore's vision of being a City in Nature (National Parks, 2021).

The multitude of challenges that Singapore faces are far from over. These challenges continue to evolve due to changing local demographics, as well as regional and global social and geopolitical shifts and economic developments. Hence, as a small city-state that is easily impacted by these various changes, Singapore must stay nimble, responsive, and relevant. It is thus imperative that its only resource – its people – are also nimble, responsive, and relevant. This can be achieved through robust employment and employability policies and an education system that is dynamic and germane. One of the initiatives introduced in the education system is that of National Education (NE, now more commonly known as the Singapore Perspectives) which was launched in 1997 and incorporated into the primary (elementary) and secondary (high) school education curricula and subjects taught in these schools. Among the intents of NE is to "...understand Singapore's history, realities and challenges unique to our nation, appreciate our journey to nationhood, cultivate the instincts for survival as a nation" (Ministry of Education, 2022), and "...instil national identity and the spirit of togetherness in our young" (Ministry of Education, 2018).

For instance, NE is incorporated in the Geography subject syllabus for secondary (high) schools, where Singapore's constraints in water availability and security are taught and discussed among 13-year-old students (Irvine, 2017). While there are criticisms of the NE initiative in the school curricula being a propaganda tool by the government (Ministry of Education, 2018), the pragmatics amongst us would argue that an understanding of a nation's constraints and challenges is crucial in developing a generation of citizens that is astutely aware of what is at stake, and what are the innovative ideas or solutions that can be explored to address such constraints and challenges, as well as their role in helping the nation survive and thrive. Hence, it can be said that Singapore started integrating the teaching of sustainable development and sustainability issues in the national agenda and national education system, as its national priority, several years before the UN SDGs became a global priority.

In the next few sections, this paper will focus on the integration of sustainable development and sustainability issues in higher education, beginning with a broad global overview that segues into an emphasis on Singapore's higher education sector.

### **3. Sustainable development and sustainability education in higher education**

The predecessors to the UN SDGs, namely the Millennium Development Goals, and Education for All, were distinctly lacking in delineating the role of tertiary or higher education as part of the promotion of lifelong learning opportunities for all (Chankseliani & McCowan, 2021). In particular, the UN SDG 4 has paved the way for universities to spearhead and lead initiatives that can help support the UN SDGs, through their role in forming communities of practice, knowledge production and dissemination, and research and innovation. Hence, universities have acquired a “larger potential for contributing to societal development”. The UN SDGs encourage universities to move beyond their “nationalistic and individualistic competitive mindsets” and take on the role of enablers of the SDGs through specific approaches and impacts they want to inspire and lead (Steele & Rickards, 2021). For instance, the University of Pretoria (South Africa) has led research studies focused on food security to help address difficulties faced by countries in tackling this challenge across the African continent; while the Ahfad University for Women (Sudan) has provided the necessary support and training for women as change agents and future leaders through academic courses, on-the-job training, and community activities. The higher education curricula and opportunities for learning by undergraduates are substantial platforms for the creation of new ideas, technologies, and solutions that can support and promote sustainable development and sustainability efforts. According to studies, the higher education ecosystem can have a lasting and decisive impact on shaping mentalities and decisions long after graduation (Žalėnienė & Pereira, 2021). Hence, higher education institutions (HEIs) are “playing a key role in fostering sustainable social and environmental transformations” (Franco, et al., 2019). There are different areas in which the HEIs can frame sustainable development and sustainability initiatives within the higher education landscape. Among the areas identified are the (i) institution’s strategic direction and institutional working practices; (ii) initiatives and schemes to support students as well as university staff in developing the relevant competencies; (iii) project development and incorporation of sustainability principles across the disciplines in the institution’s teaching and research centers; and (iv) initiatives to work with and support the various stakeholders and user groups in society; and (v) policies to establish a sustainable campus (Elmassah, Biltagy, & Gamal, 2022); (Žalėnienė & Pereira, 2021).

### **4. Higher Education in Singapore**

The higher education sector in Singapore is a well-regulated and well-resourced one (Loke & Gopinathan, 2017), with only six public-funded and autonomous universities; five public-funded polytechnics that confer diplomas; three technical and vocational institutes (known as the Institute of Technical Education); and two specialized Arts schools that will merge in 2024 to form the first government-supported private university for the Arts (Ministry of Education, Singapore, 2022). Other than the local HEIs, there are several private education institutions (PEIs) that are highly audited and regulated by the Ministry of Education. Across all the local HEIs in Singapore, the focus has always been on skills training and preparing graduates for the industries, where higher education

is “...instrumentally considered as a tool of economic development” in Singapore (Lo, 2014).

Despite the government’s initial efforts in making Singapore a “global schoolhouse”, where the local education landscape is reformed to keep up with the demands of globalization and attract more international, fee-paying students (Ng & Tan, 2010), the government had to pivot soon after the 2011 general election where the local population made known their concerns and apprehension about local competition for jobs and opportunities in Singapore (Lo, 2014). In the 2012 National Day Rally, Prime Minister Lee Hsien Loong announced the government’s plans to create more university places for Singaporeans in publicly funded universities, by increasing the cohort participation rate (CPR) for university degree education to 40% by the year 2020 (Ministry of Education, Singapore, 2012). Meanwhile, the CPR for the polytechnics was set to another 40%. These plans and targets help to meet the demand for local graduates which is likely to increase as Singapore would require a highly skilled and sophisticated local workforce to drive its future economy. It is recognized that the HEIs play a crucial role in not just providing education in and of itself, but also education for employment and employability opportunities for Singaporeans.

The current Minister for Education, Mr Chan Chun Sing, also shared his view of how the HEIs will progressively take on the role of ‘institutions of continuous learning’ or ICLs, where the bachelor’s degree will no longer be a terminal or qualifying qualification for employment (Davie, 2022). More graduates and working adults will return to HEIs or ICLs throughout their careers, to take up modular courses or skills certifications that are required and relevant to their work. In other words, continuing education and training, or CET, will be an increasingly important function of HEIs that will play a significant role in this ‘work-learn continuum’ between HEIs and industries. Hence, as the Singapore higher education landscape evolves, keeps up with changes, and attempts to stay globally relevant, the HEIs continue to build on their relationships and linkages with industry partners and stay relevant to the needs of the industries as well as employees and working adults.

One of the areas in which companies and organizations in Singapore have had to make significant changes in are those related to climate change and sustainability initiatives. Climate disclosure rules and sustainability reporting were announced by Singapore Exchange Regulation (SGX RegCo) in December 2021 after a public consultation. These disclosures will be mandatory from financial year (FY) 2023 for companies in the financial; agriculture, food, and forest products; and energy industries. Companies in the materials and buildings, as well as transportation industries, must submit these disclosures from FY 2024 (Singapore Exchange Limited, 2021).

In addition, the launch of the Singapore Green Plan 2030 in February 2021, which was spearheaded by five Ministries in Singapore, has paved the way in galvanizing a “...whole-of-nation movement and advance Singapore’s national agenda on sustainable development” (Singapore Green Plan 2030, 2022). There are five key pillars of the Singapore Green Plan: (i) developing Singapore as a City in Nature; (ii) fostering Sustainable Living where the citizenry practices green habits and consumes and wastes less; (iii) paving the way for an Energy Reset in the nation such as through green energy and greener infrastructure and built environment; (iv) promoting a Green Economy where

sustainability is the engine powering jobs and economic growth; and (v) working towards a Resilient Future for the nation and its people.

As a result of these new industry regulations for increasingly more companies and concrete plans to advance Singapore's national agenda on sustainable development, knowledge and skillsets related to sustainability education and sustainability reporting, become much sought-after by employees. Hence, in keeping with industry needs, the HEIs in Singapore have begun to incorporate sustainable development and sustainability education in the higher education landscape. For example, in the National University of Singapore (NUS), which is the largest university in Singapore, sustainability and climate action is a core focus of the university, implemented through its University Sustainability and Climate Action Council, headed by its University President (National University of Singapore, 2022). NUS channels its efforts and resources in sustainability and climate action through (i) the undergraduate and postgraduate curricula as well as continuing education programs; (ii) research and innovation projects focused on inter-disciplinary sustainability solutions; (iii) sustainable campus operations and administration; and (iv) partnerships for sustainability. NUS has integrated environmental, social, and economic concerns and other sustainability themes into their general education and common modules across the different degree programs offered. In addition, their faculty and research staff are leading numerous sustainability-related projects such as green energy technologies, nature-based climate solutions, urban heat resilience, and coastal engineering and flood prevention, among others.

Likewise, the second largest university in Singapore, the Nanyang Technological University (NTU) has a "15-year manifesto that will guide its actions and solidify its reputation as one of the global leaders in sustainability" (Nanyang Technological University, 2022). Guiding its sustainability strategies is its Sustainability Framework that sets out the specific goals, initiatives, and pathways along four core pillars: (i) education programs that develop competence, character, and cognitive agility; (ii) high-impact interdisciplinary research; (iii) innovation through industry and society partnerships; and (iv) fostering a diverse, cohesive and inclusive NTU community. As a leading research-intensive university, NTU conveys its "commitment to developing innovative solutions to global sustainability challenges" through its dedicated research centers focused in the areas of sustainability, such as the Energy Research Institute@NTU (ERI@N), Nanyang Environment & Water Research Institute (NEWRI), Singapore Centre for Environmental Life Science and Engineering (SCELSE), and the Earth Observatory of Singapore (EOS).

Similarly, the Singapore Management University (SMU), the fourth largest university in Singapore based on student enrolment, has also developed its university's sustainability strategies. These strategies are developed along four pillars: (i) cultivating a greener university; (ii) developing change agents through education and the undergraduate and postgraduate curricula; (iii) driving impactful research in sustainability solutions; and (iv) fostering resilient communities through co-curricular initiatives (Singapore Management University, 2022). For instance, the SMU Sustainability major from the Lee Kong Chian School of Business allows SMU graduates from across the various degree programs to take up a major that is focused on the "...three areas of societal importance in cohesion: economic growth, human development and the environment". It is anticipated that SMU graduates who have this Sustainability major will be more prepared to enter the job market

in the business or public sectors, with their current requirements related to climate and sustainability action.

## 5. The Singapore Institute of Technology

The Singapore Institute of Technology (SIT) is a relatively young university in Singapore. First launched in 2009 as an overseas university partner, and established as an autonomous university only in 2014, SIT is recognized as the university of applied learning in Singapore. The various degree programs in SIT are targeted at growth sectors of the economy and developed based on industry needs, while internships are mandatory and central to the curriculum through its Integrated Work-Study Program, which is a graduation requirement. More than half of its academic staff are industry practitioners and bring real-world experience and expertise, and the latest discoveries in their fields, to the university's degree programs (Singapore Institute of Technology, 2022). With these unique characteristics, SIT has distinguished itself as a university that is not just about lectures and tutorials, “blue-sky” research, research grants, or publications. SIT is a university that offers a “curriculum that blends innovation and expertise with applied research and practical experience”; and “advocates the work-learn continuum, which places an emphasis on upskilling and lifelong learning”.

While the university is relatively young, it has put in place bold and comprehensive plans to incorporate sustainable development and sustainability education in its curriculum, and in the overall university strategies and plans as it prepares to move to its new open campus that integrates learning, industry, and the community, in the northeastern part of Singapore.

## 6. Development and sustainability education in the SIT university curriculum

SIT went through an extensive curriculum review and harmonization exercise from mid-2020 to early 2022. Part of this curriculum review and harmonization was to introduce a selection of university-wide modules that are graduation requirements for SIT undergraduate students, as well as the introduction of a mandatory micro-module known as Introduction to Sustainability. These changes are implemented from AY2022 for the intake cohort of that academic year.

Among the mandatory university-wide modules are (i) Introduction to Design Innovation; (ii) Interdisciplinary Design Innovation; and (iii) Social Innovation Project. These three university-wide modules are interrelated and build on Design Thinking principles which would require students to carry out substantial user engagement and iterative solutioning co-created with the users, in addressing the problem statement at hand. The problem statements covered in the first two university-wide modules (Introduction to Design Innovation; and Interdisciplinary Design Innovation) are more generic in nature, which allows students sufficient opportunities to develop their understanding of Design Thinking principles and framework. The first module on Introduction to Design Innovation places more emphasis on the overall phases of Design Thinking, value propositioning, developing empathy for their users, and carrying out substantive needs analyses. The second module on Interdisciplinary Design Innovation focuses more on ideation and

solutioning, scaling up their proposed designs and solutions, and facilitating systemic changes. The two design innovation modules prepare students in addressing real-world problems under the University's characteristic applied learning pedagogy. In the context of sustainability education in SIT, students will apply the learned methodologies in the Social Innovation Project module, as well as other sustainability-related projects in other modules offered. The problem statements presented in the Social Innovation Project module are focused on social and environmental issues and challenges and aligned to the UN SDGs – ranging from climate action (SDG 13) and fostering sustainable cities and communities (SDG 11), to engendering good health and well-being (SDG 3), and nurturing peace, justice, and strong institutions (SDG 16). A sample of such problem statements is shown in Table 1.

**Table 1.** Sample problem statements for Social Innovation Project module

National Council of Social Service (NCSS)	Engineering Good (EG)	Mandai Wildlife Group (MWG)	National Library Board (NLB)
<ul style="list-style-type: none"> <li>• How might we help multigenerational families who live apart develop stronger bonds?</li> <li>• How might we help youths with mental distress express themselves to trusted persons so that they can get help they need, thereby improving their mental health and coping abilities?</li> </ul>	<ul style="list-style-type: none"> <li>• Design an application for Teachers to use to teach children with disabilities to perform in-school tasks independently</li> <li>• Design a device to help improve environmental/ surrounding awareness for people with hearing impairments</li> </ul>	<ul style="list-style-type: none"> <li>• How can we promote human-wildlife co-existence in an increasingly urbanized Singapore?</li> <li>• Sustainable Living - What can be done to influence our community and encourage more of us to take proactive measures to live more sustainably.</li> <li>• Simplifying Recycling - How can we simplify the rules of recycling such that the general public can remember and make recycling second-nature to them</li> </ul>	<ul style="list-style-type: none"> <li>• How might we help Singaporeans build their sustainability literacy skills?</li> <li>• How might we build on existing outreach efforts like the NLB's S.U.R.E Programme to help the elderly detect scams better?</li> </ul>

The main emphasis of the Social Innovation Project module is on interdisciplinary teamwork, where students from different degree programs work in teams of 3 to 5 students on their chosen problem statement. In addition, each team is facilitated by a Resource Person who can be an academic or corporate staff member from the university, or an employee from a partnering company or organization keen to work with the students on problem statements that form part of their company's or organization's corporate social responsibility efforts or Environment, Social and Governance (ESG) initiatives. The Resource Person is not a project supervisor, as the project is done as an independent-learning and student-led endeavor. However, the Resource Person acts as a facilitator to guide the students on managing the scope of their project and to sign-post them to



appropriate and relevant resources that they could look up and use to inform their project and proposed solution(s).

Another mandatory requirement for the students is the micro-module on Introduction to Sustainability. This micro-module is a pre-requisite to the Social Innovation Project module and introduces students to the UN SDGs, sustainability reporting (e.g., the Global Reporting Initiative), the Singapore Green Plan 2030, and more specifically to sustainable development and sustainability-related challenges facing Singapore – with regard to potable water, waste management, and air quality. The micro-module sums up with getting students to reflect on what is their personal and future professional roles in ensuring sustainable development in and for Singapore, and their potential contribution to the global sustainability movement.

The micro-module is currently being developed further to segue into a Minor in Environmental Sustainability. Upon successful completion of the relevant modules and the corresponding number of credits, as well as a substantial project related to sustainable development or sustainability, an SIT student can graduate with this Minor in Environmental Sustainability to complement their bachelor's degree. This Minor is planned to be launched in AY2023.

In addition, a curriculum review is being conducted on all modules offered in different programs to identify modules that have relevance to sustainability. The aim is to sharpen and enhance sustainability content and align them with the Ministry of Education's green skills framework and UN SDGs. For example, SIT has existing modules in renewable energy and energy efficiency. These modules will be enhanced to reflect and include decarbonization strategies implemented nationally to achieve Singapore's net-zero carbon target by the year 2050. By aligning this with the national agenda, students will understand the relevance between domain-specific sustainability strategies and national-level sustainability frameworks

## **7. Lessons learned and the way ahead**

One significant observation and learning point discovered through the initial engagement, discussions, and planning for the changes to be made to the SIT curriculum in incorporating sustainable development and sustainability education, was that the approach has to move away from merely detailing or extolling our achievements in climate action or sustainable development in the local context. The approach that is more amenable to our current generation of students who are part of Generation Z, or the Zoomers, is to put them in the driver's seat and ask them questions such as:

- What else and what more do we need to do, with you in the driver's seat?
- What is your role in sustainable development and sustainability issues, as well as climate action, in Singapore, regionally, and globally?
- How can you contribute to the solutions to our current social and environmental issues and challenges?

From SIT's understanding, our students, mostly Zoomers, want to be part of social advocacy and action, and they want to co-create solutions. Hence, ample opportunities for these need to be curated in the university curriculum through hands-on and applied learning, working closely with community and industry partners, as well as user groups and

beneficiaries. Thus, the questions listed above are questions that are posed to the students before they embark on and as they plan their project or initiative related to sustainable development and sustainability. These are also questions that we encourage our students to introspectively and retrospectively address when they reflect on their learning and journey in carrying out their project related to sustainable development and sustainability. Another important observation and learning point discovered is the continued relevance of the higher education landscape in promulgating this integration of sustainable development and sustainability education as a holistic educational approach that cuts across disciplines and degree programs. From SIT's experience, the interdisciplinary approach that HEIs can take in addressing social and environmental issues and challenges would greatly reflect the real-world context where solutions are not derived from one single discipline, origin, or person. It takes a team of interdisciplinary members with diverse backgrounds, experience, and expertise to generate a thorough and innovative solution that can address a current social or environmental issue or challenge. That interdisciplinarity constituent of teams also helps to promote inclusivity, lifelong learning, and the spirit of innovation, as addressed in a few of the SDGs (SDG 4, 8, 9, and 11).

A third learning point is that no single HEI can sufficiently provide that comprehensive environment or context for meaningful or impactful sustainable development and sustainability education to take place, due to limited resources. One way to get around this is for HEIs to collaborate and share resources that can make sustainable development and sustainability education more meaningful and impactful. For a small country such as Singapore, the local context can be rather limited. For a small and young university such as SIT, collaboration with other HEIs would create more opportunities for projects and applied learning to take place. Hence, SIT has put in place plans to expand its Social Innovation Projects to the Southeast Asian region, in collaboration with regional universities. The Southeast Asian region provides a rich and diverse context for learning across cultures and systems, and a myriad of opportunities to collaborate and apply learned knowledge and skills to address challenges as spelled out in the UN SDGs. This collaborative partnership beyond one's context or sphere of activity itself would address the SDG on fostering partnerships in realizing the goals of the SDGs (SDG 17), as well as in reducing inequality within and among countries (SDG 10).

For SIT, incorporating sustainable development and sustainability education in its curriculum, programs, and initiatives is an ongoing process where the university is still learning, making the necessary adjustments to enhance its intents, contents, and delivery, and establishing collaboration with like-minded partners in doing so

## **8. Conclusion**

For SIT, the start of this journey in incorporating sustainable development and sustainability education in the university curriculum has not been easy and has been a process of consistent learning – learning from others and learning from its own mistakes and experience. What is important is that what can be distilled from these learning and experiences is integrated into the university's priorities, strategies, and curriculum (Elmassah, Biltagy, & Gamal, 2022); (Žalėnienė & Pereira, 2021), in a bid to continuously and consistently improve and stay relevant. As Franco et al (2019) alluded to, when HEIs

make a concerted and consistent effort to do so, it lays the foundation for alignment with the global sustainability agenda and helps their students develop the necessary competencies and experience to play an active role in fulfilling this agenda.

The higher education landscape has transformed significantly and will continue to evolve as the global economy shifts, demographics change, aspirations and expectations develop over time, technologies advance, and societies and nations progress. As the adage goes, change is the only constant. For now, sustainable development and sustainability education is the prevailing demand for both would-be graduates and employers. While we may not be able to foretell what the next revolutionary change will be, we know that the higher education landscape cannot afford to play catch up with the changes the world is going through. HEIs need to stay at the forefront of changes and work closely with industry and community partners in ensuring their higher education curricula and offerings remain relevant and up-to-speed with what the younger generation as well as the business and public sectors need. Our work in the higher education sector continues.

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