Times Higher Education

جامعة الأمير سطام بن عبدالعزيز
PRINCE SATTAM BIN ABDULAZIZ UNIVERSITY

June 2025

Advancing the Sustainable Development Goals through academic innovation

Measuring higher education’s impact on sustainability

Assessing institutions’ contributions to sustainability helps connect academic innovation with societal needs and shape future leaders with knowledge of sustainability goals

17 PARTNERSHIPS FOR THE GOALS

UN Sustainable Development Goal 17:
Strengthen the means of implementation and revitalise the global partnership for sustainable development.

Front view entrance to the PSAU main campus in Al-Kharj, Saudi Arabia.

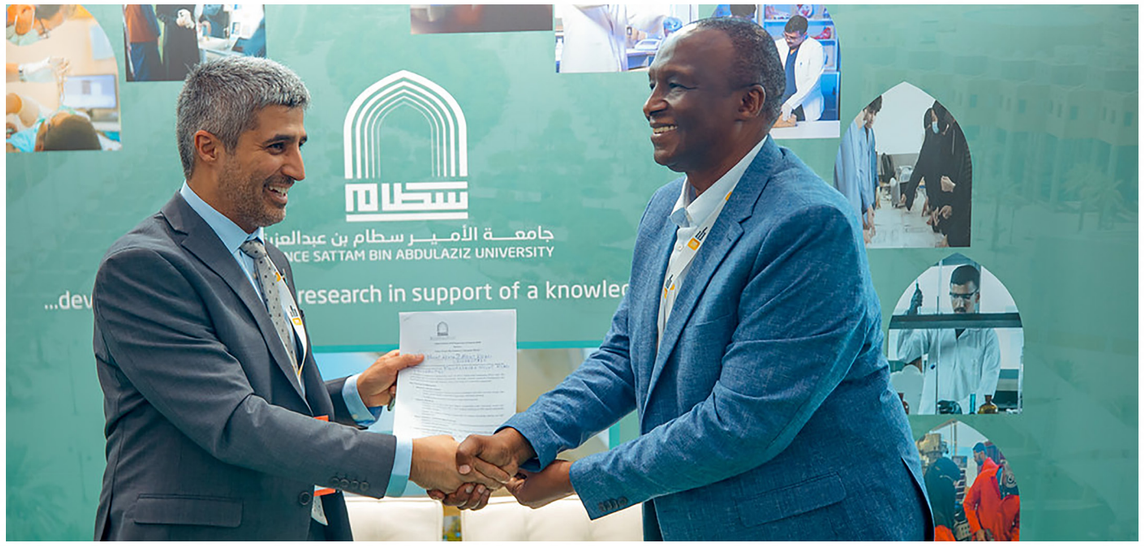
Introduced by the United Nations (UN) in 2015, the 17 Sustainable Development Goals (SDGs) consist of 169 targets and are a call to action for all countries to form a global partnership to drive sustainable progress. The SDGs recognise that tackling climate change and preserving our oceans and forests must go hand-in-hand with efforts to address other societal challenges such as eradicating poverty and reducing inequalities, improving health and education, and promoting economic growth in all parts of the world. These goals are a blueprint for peace and prosperity for people and the planet.[1]

In 2024, a UN progress assessment of the SDGs showed that the world is severely behind on realising the 2030 Agenda for Sustainable Development, with just 17 per cent of assessable targets displaying the required progress. Nearly half show minimal or moderate progress, and progress on over one-third has stalled or even regressed.[2] Goal 17 – Partnerships for the Goals – shows the third-highest level of progress with 31 per cent of assessable targets on track or met, just behind goal seven (40 per cent)[3] and goal 12 (40 per cent). But there is still a great distance to go to achieve the ambitious targets set in 2015.

Universities' commitment to SDG 17

Times Higher Education's (THE) Impact Rankings seek to identify universities that showcase their commitment to addressing the world's most pressing challenges, including environmental sustainability, social inclusion, economic growth and partnerships.[4] Considering SDG 17 in particular, the top institutions excel in forging strong international partnerships that support sustainable development across various sectors. Through collaborative research, shared knowledge and mobilisation of resources, they facilitate effective global networks that enhance technological capabilities, financial support and policy alignment for the SDGs.

Through the submission of evidence to metrics and indicators developed to reflect the higher education sector's contribution to the SDGs, institutions in the THE Impact Rankings are scored to identify global leaders and showcase best practices. Submission to SDG 17 is mandatory for an institution to be ranked in the overall THE Impact Rankings, with 2,031 universities from 121 countries and regions participating in 2024.



PSAU Vice President for Research and Postgraduate studies with the Vice Chancellor of the Mount Kenya University (MKU) after signing an Expression of Interest for the PSAU Global South Partnership at the THE 2025 Africa University Summit in Kigali, Rwanda.

THE Impact Rankings 2024 – SDG 17 metrics:

17.1 Research

27%

- Number of research publications that relate to the UN SDGs
- Proportion of research publications with co-authors from lower or lower-middle-income countries

17.2 Relationships to support the goals

18.5%

- Collaborations and relationships with non-governmental organisations and governments relating to the SDGs, including policy, capturing data and research and educational programmes
- International collaborations to develop best practice on tackling the SDGs

17.3 Publication of SDG reports

27.2%

- Publication of progress against each of the UN SDGs, either individually or within an annual report

17.4 Education for the SDGs

27.2%

Programmes teaching the next generation about adopting sustainability in their lives, through university curricula for students and outreach activities for the wider community. A 2022 THE survey of 3,151 prospective students found that 71 per cent of students were aware of the SDGs but only 17 per cent had a good level of knowledge.[5] Eighty-seven per cent agreed (46 per cent strongly) that universities have an important role to play in enhancing the ethic of sustainable citizenship in their students. And 72 per cent agreed that "it is important for my future career prospects that I can demonstrate to employers that during my time at university I have developed into a sustainable citizen".

Given the lack of student knowledge of the SDGs (with THE research in 2022 showing only 17 per cent had a good level of knowledge), a focus on metric 17.4 becomes crucial to better inform students and to engage and empower the next generation to maintain the global commitment to the critical issues that the SDGs seek to address.

[1] https://sdgs.un.org/goals
[2] https://unstats.un.org/sdgs/report/2024/The-Sustainable-Development-Goals-Report-2024.pdf
[3] Goal 17: 5/16 assessable targets on track or met, Goal 7: 2/5 assessable targets on track or met, Goal 12: 4/10 assessable targets on track or met.
[4] https://www.timeshighereducation.com/impactrankings
[5] https://www.timeshighereducation.com/student/students-sustainability-survey

PSAU students walking along the shaded campus walkway at the University City in Al-Kharj, Saudi Arabia.

Universities' performance on metric 17.4 – education for the SDGs

In the THE Impact Rankings, metric 17.4 focuses on universities' use of dedicated programmes to teach the next generation about adopting sustainability in their lives, through university curricula for students and outreach activities for the wider community.

Globally, the 2,031 institutions that submitted evidence for SDG 17 in the Impact Rankings had a median score of 59.2 out of 100 for metric 17.4. Compared with other metrics within SDG 17, 17.4 showed the highest global median, reflecting marginally stronger evidence of commitment to education for the SDGs compared with activity in research, relationship development and monitoring of SDG progress.

Figure 1 shows that regionally, North American institutions had the highest median score for metric 17.4, followed by institutions in Latin America and the Caribbean and then East Asia and the Pacific.[6] The median for Sub-Saharan Africa, South Asia and the Middle East and North Africa all fell below the global median benchmark.

Figure 2 shows a positive relationship between performance in metric 17.4 and performance in the overall Impact Rankings position. Institutions in North America demonstrated the highest average rank. Although institutions in the Middle East and Africa had a higher average rank than those in Sub-Saharan Africa, the median score of 17.4 was higher for the latter.

[6] https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Figure 1: 17.4 – education for the SDGs, median by World Bank region

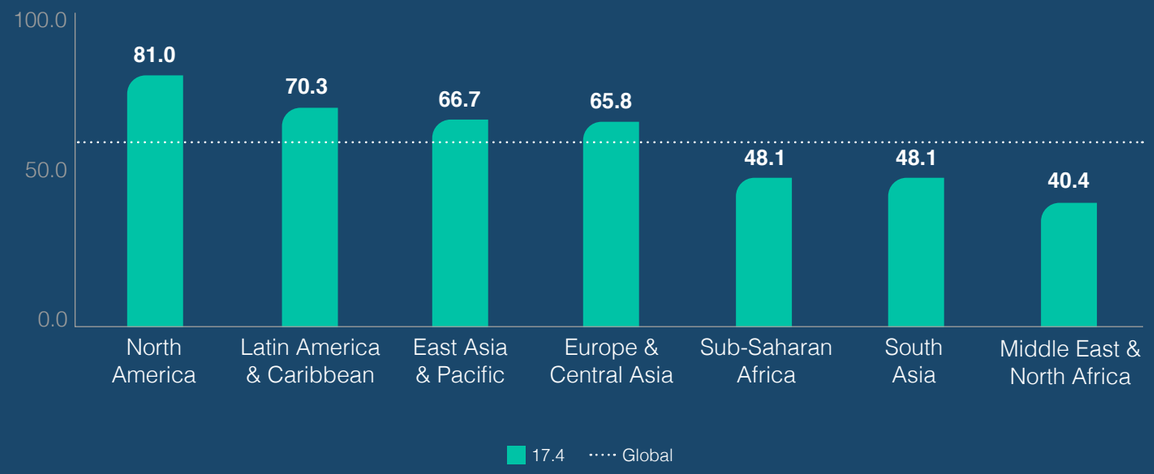
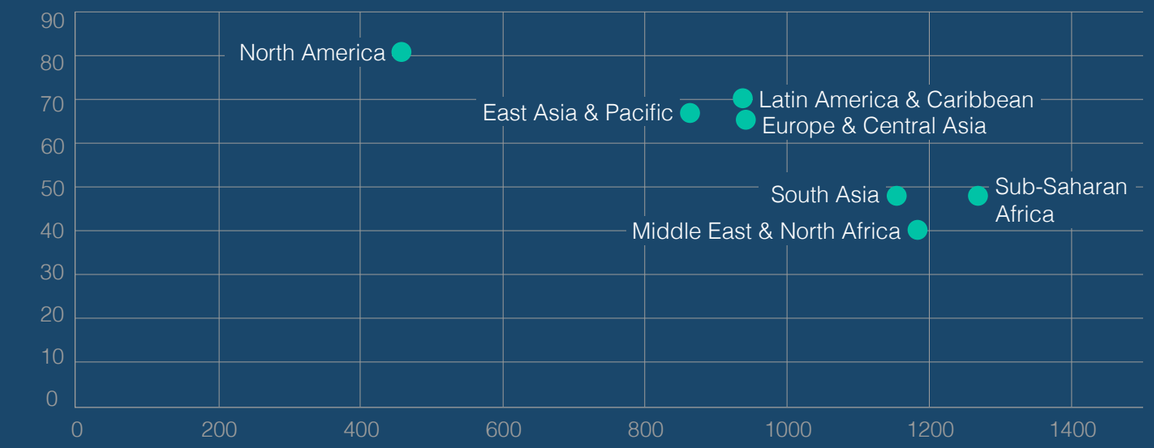


Figure 2: 17.4 – education for the SDGs, median by World Bank region v average overall THE Impact Rankings 2024



Case study: Western Sydney University

Ranked first in the THE Impact Rankings for three consecutive years, Western Sydney University in Australia continues to demonstrate its world-leading commitment to achieving the SDGs. It makes a clear distinction[7] between:

- **Education for sustainability:** the pedagogical approach
- **Education about the SDGs:** recognition of the SDGs and understanding of the larger global framework
- **Education that contributes to the SDGs:** programmes and learning activities that contribute to the intent of the SDGs

Sustainability is formally outlined as a graduate attribute within the curriculum design at Western Sydney University.[8] It has launched the Global Sustainability Award, which is an additional certificate co-branded with the Regional Centre of Expertise on Education for Sustainable Development in Great Western Sydney (RCE-GWS).[9] Open to all students, the award combines the university's global sustainability sub-major and associated social action project with its Sustainability Bootcamp, allowing students to graduate with a Global Sustainability Award. The university also works closely with the RCE-GWS and the local community to tackle key sustainability challenges.[10]

Using the World Bank income classification, figure 3 shows that institutions in high-income countries have the highest median score for metric 17.4.[11] Lower-middle-income countries had a higher median score than upper-middle-income countries, and there was a notably low score in low-income countries. The highest scores of high-income countries were found in countries including Australia, Ireland and Hong Kong.

Detailed scores by World Bank region

THE's Impact Rankings measure institutions against indicators under each metric, specifically designed to assess universities' commitment to the SDGs. Metric 17.4 – which looks at the role of education in promoting and achieving the SDGs – comprises:

- **17.4.1 – Education for SDGs:** commitment to meaningful education
- **17.4.2 – Education for SDGs:** specific courses on sustainability
- **17.4.3 – Education for SDGs** in the wider community

Looking at individual indicators, indicator 17.4.2 – focusing on specific courses on sustainability – had the highest median for all regions, with the exception of the Middle East and North Africa, though in this region there were some strong-performing countries, including Saudi Arabia, the United Arab Emirates, Morocco and Jordan, all with a median score over 80 out of 100.

[7] https://www.westernsydney.edu.au/driving_sustainability/sustainability_education

[8] https://www.westernsydney.edu.au/driving_sustainability/sustainability_education/curriculum/sustainability_capabilities

[9] https://www.westernsydney.edu.au/driving_sustainability/sustainability_education/curriculum/global_sustainability

[10] https://westernsydney.edu.au/rcegws/rcegws/rce_programs

[11] https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

Figure 3: 17.4 – education for the SDGs, median by World Bank income classification

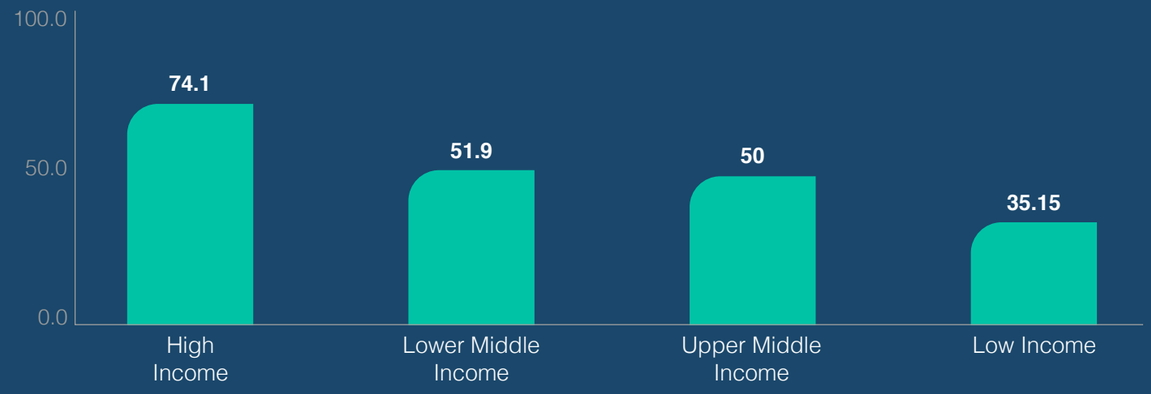
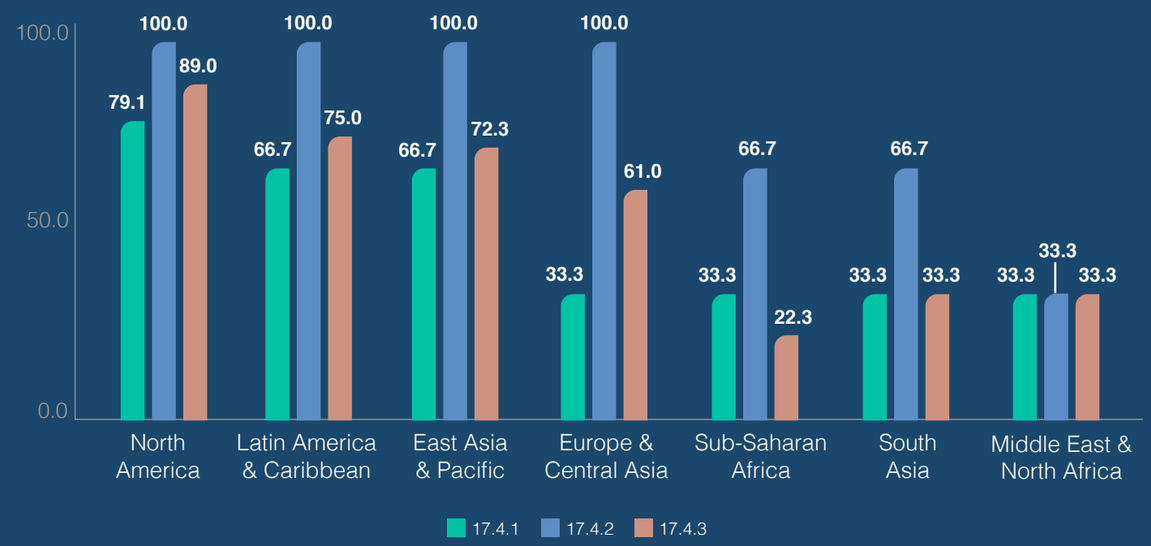


Figure 2: 17.4 – education for the SDGs, median by World Bank region and indicator



Case study: King Abdullah University of Science and Technology

جامعة الملك عبدالله للعلوم والتقنية
King Abdullah University of Science and Technology

Performing strongly across metric 17.4 and ranked seventh within SDG 17 in the 2024 THE Impact Rankings, King Abdullah University of Science and Technology (KAUST) in Saudi Arabia demonstrates strong commitment to enable, enhance, empower, embrace and evaluate sustainability and the SDGs in all aspects of the institution.[12]

Not only is KAUST mapping courses to relevant the SDGs and driving innovative research to advance global sustainable development, it also empowers targeted action groups led by students, such as Students for Sustainability.[13]

In February 2024, KAUST, in partnership with the United Nations Development Programme and Frontiers for Young Minds, announced the launch of a new educational initiative designed to enhance scientific and sustainability literacy for children.[14] KAUST's SDG education extends into the community with regular initiatives, such as Saudi Youth for Sustainability.[15]

Evidently, there is a global commitment to SDG education, demonstrated not only by the sheer volume of institutions submitting evidence for SDG 17 in THE's Impact Rankings, but the clear strength in many regions of the world is the existence of relevant and impactful activity. While the UN shows there is still a considerable way to go to meet the SDG targets globally by 2030, it is clear that universities are contributing significant efforts to educating the next generation to accelerate this progress.

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[12] https://sustainability.kaust.edu.sa/
[13] https://campusconnect.kaust.edu.sa/sustainability/home/
[14] https://www.kaust.edu.sa/en/news/new-resource-to-promote-scientific-literacy-for-sustainable-development
[15] https://sys.kaust.edu.sa/

A PSAU Dentistry student in a simulation lab.

Empowering global change through SDG education

PSAU students at the main campus in Al-Kharj, Saudi Arabia.

ARTICLE 2

Prince Sattam Bin Abdulaziz University is placing sustainability at the forefront of its teaching to tackle society's biggest challenges

Higher education has a vital role to play in developing a new generation of sustainability champions –people with the skills, knowledge and leadership qualities needed to address the biggest issues facing our world. From climate action and food security to supporting life on land and in our oceans, the need for innovation is urgent. That is why Prince Sattam Bin Abdulaziz University (PSAU) in Saudi Arabia has undertaken a holistic realignment of its teaching and learning using the United Nations' Sustainable Development Goals (SDGs) as a lodestar for its curriculum.

Driving this realignment is Abdullah M. Elias, professor and director of PSAU's Rankings, Strategy and Institutional Advancement department (RASU). A passionate advocate of the SDGs, Elias shares that the key vision of PSAU is to see its students think about how they can find solutions to global issues using sustainability as a frame of reference. He wants sustainability to inform his students' learning.

PSAU wants to ensure that every course offered at the university is linked to an SDG. "We want to see to what extent we can integrate the SDGs into our curriculum and the way we teach," says Elias. "It is important that students understand what the SDGs are and their importance. Our generation and the generation before us contributed to the challenges, but we have to be part of correcting, or at least making amends required, so that our children and grandchildren can have a better future."

Elias says his vision for SDG-focused education was initially met with scepticism, and he urged the sceptics to look at how the world was changing. For example, the Al-Jawf Desert in Saudi Arabia received snowfall in 2024, a reminder of how delicate climate

dynamics are. “When we talk about the SDGs, a lot of it is really about leadership,” he says. “Without the right kind of leadership, the fight against climate change cannot be won.”

Elias credits the Vision 2030 initiative as a catalyst for change in Saudi Arabia, encouraging buy-in and accelerating sustainable innovation. “What we have been able to do at PSAU is show the connection between Vision 2030 and the SDGs,” says Elias. “That has made it much easier for us to argue and to emphasise the importance of the SDGs.”

At PSAU, engineering students are introduced to the SDGs from day one. After completing a year of foundational learning in subjects such as maths and physics, students undertake an introductory engineering course that incorporates project-based learning to develop a strong understanding of the 17 SDGs. “The classes focus on the role of engineers in attaining the SDGs,” Elias says. “How do we as engineers contribute towards realising the SDGs? The course introduces them to the SDGs and we identify the SDGs that engineering has a direct impact on.”

The students are divided into groups to brainstorm solutions relating to one or more of the SDGs. “They were tasked to identify a problem to solve. However, the problem must have elements of engineering. It must be a real problem with a tangible outcome and also address at least one SDG. In the course of doing that, they understand what the SDGs are,” says Elias. “They have to understand the targets, the indicators and the way that SDG attainment is assessed to be able to link a certain project to an SDG and corresponding targets.”

In doing so, students also develop the problem-solving and teamwork skills that will be essential in the workplace. They engineered a number of innovations that directly addressed one or more SDGs, such as a water recycling and filtration system. “When, as professionals, they realise the importance of the SDGs in what they do, they will be the ones at the forefront in terms of advancing the SDGs,” Elias says.

In 2023, PSAU hosted a university-wide exhibition called SDG Week to raise awareness of the SDGs, where every exhibit had a prototype with a clear indication of which SDG that project was related to. Some of these projects were subsequently exhibited at the PSAU booth during 2023 THE Global Sustainable Development Congress (GSDC) at KAUST. This deeper understanding of the SDGs prepares students for their future education and for experiences such as PSAU’s summer learning project, conducted in partnership with Imperial College London. It’s an intensive six-week programme where students from PSAU study in London, gaining hands-on experience with prototyping at the advanced hackspace at the White City Campus. PSAU students work in collaboration with students from across the globe, developing their professional and academic English in the process.

The likelihood that we may fail to meet the UN’s sustainability targets by 2030 is all the more reason to redouble our efforts, says Elias. He believes universities can lead the charge and says rankings

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>
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> Director of PSAU’s Rankings, Strategy and Institutional Advancement Department.

such as THE’s Impact Rankings give them incentives to do so. Elias wants PSAU to be renowned for its SDG education across all disciplines. By 2030, PSAU aims to be in the world’s top 200 universities, and it is investing in global partnerships, faculty training and radically remodelling its teaching strategy to meet its targets.

PSAU’s efforts towards the SDGs place a significant focus on collaboration, exemplified by its Global South Partnership initiative. Through this initiative, PSAU aims to shift the focus from the traditional outcomes in higher education by developing policy and providing guidance to governments to reduce disparities in SDG target attainment between the Global North and South.

“We believe, with such partnerships, we’ll be able to identify common areas and work towards solving them,” says Elias. “While there is talent everywhere, resources are not equal everywhere. We want to provide the financial and technical support that our colleagues in the Global South require. Together, we want to partner to be able to identify these important SDG-related issues and address them.”

PSAU students explaining their project to delegates during the 2023 THE Global Sustainable Development Congress at KAUST.

Staff of PSAU RASU attending to delegates at their booth during the 2024 THE Arab Universities Sumit in Dubai, UAE.

Driving sustainable innovation through global partnerships

ARTICLE 3

Prince Sattam Bin Abdulaziz University's strategic partnership with Imperial College London demonstrates how collaborations with world-class institutions can enhance the student experience, support employability and foster a culture of innovation

The dynamism of strategic partnerships in higher education is often discussed within the context of research, where collaboration serves as a catalyst for innovation. However, partnerships can offer a similarly powerful avenue for designing new teaching and learning experiences that help students develop the skills and knowledge they need to be competitive in the 21st-century workplace.

By improving the quality of education and presenting students with a global perspective on their studies, these partnerships can support a university's strategic priorities while promoting sustainable growth. Prince Sattam Bin Abdulaziz University's (PSAU) summer training programme, hosted in partnership with Imperial College London, presents a fascinating case study on how this might look in practice.

PSAU has redesigned its curricula to orientate its teaching around sustainability. It uses the United Nations' Sustainable Development Goals (SDGs) and the Saudi Vision 2030 initiative to guide its academic strategy. As a world-renowned institution, Imperial is a model for excellence in teaching and research – particularly in STEM subjects. PSAU sees such collaborations as vital to enhancing its academic and research output.

Inaugurated in 2023 and expanded in 2024, the PSAU-Imperial summer training programme presented PSAU students with 10 weeks of intensive learning, six of which were undertaken at Imperial's state-of-the-art London campus. An international cohort of students was grouped into interdisciplinary teams to tackle projects in AI and data science, engineering and prototyping, with a larger focus on deepening their understanding of the SDGs.

The programme's goal is to drive innovation on campus and translate student-led innovations into practical applications in the world, creating a generation of graduates capable of tackling the biggest challenges facing our society. Entrepreneurship and business modelling were key components of the programme. In London, students worked on real-world innovations, which they brought back to Saudi Arabia to present to their peers and management at PSAU. The final, post-training stage of the programme involved patent applications and the commercialisation of the students' innovative solutions.

More than 300 students from different departments at PSAU applied to participate in the summer training programme. The selection was based on academic merit, particularly students' knowledge of the SDGs. At least 10 per cent of the cohort had to be women. Shortlisted applicants were invited to interviews, and 31 were selected to travel to London.

"It has always been students from engineering, computer science and the physical and applied sciences," says Abdullah M. Elias, director of PSAU's Rankings, Strategy and Institutional Advancement Department. "In the 2025 cohort, we are expanding to have students from the College of Business and students from medicine, nursing and pharmacy."

The first four weeks of the programme were undertaken in Saudi Arabia and delivered by faculty members from Imperial's Data Science Institute. Students were given a comprehensive two-week introduction to Python, with lectures on how the programming language can be used in numerical processing, machine learning, natural language processing and model output interpretation. They were taught how to handle data for machine learning and use various sampling methodologies.

The students applied this knowledge in hands-on, project-based sessions. Recognising that intellectual curiosity can be a powerful driver of innovation, the programme supervisors encouraged students to explore their interests and suggest and evaluate potential projects.

Divided into groups, the students delivered a project by the end of the fourth week. An assessment commissioned by PSAU revealed that the four weeks were a success, with the final week providing “a valuable opportunity for students to enhance their understanding of programming and analytical concepts while collaborating on real-world applications. The hard work of all the groups was evident in their presentations”.

Introductory sessions at Imperial supported the SDG-based education PSAU’s students had received in Saudi Arabia, with lessons taught on the impact of climate change, renewable energy and the challenge of reducing carbon dioxide emissions.

Covering topics such as smart cities and clean energy, the syllabus was resolutely 21st-century, with a practical component to show students how these technologies could be applied in society and how they could use their creativity to find solutions. Lectures on innovation presented students with a roadmap for applying creativity in their academic and professional careers. Imperial’s Centre for Academic English conducted sessions to develop students’ professional and academic English skills.

By the eighth week of the programme, students had learned about design engineering strategies, AI-assisted audio design, blockchain and how to present technologically advanced ideas to others. They had made use of Imperial’s world-class infrastructure, familiarising themselves with its Advanced Hackspace at the Imperial White City Campus, a prototyping hub that is designed to help innovators take their ideas from theory to application.

In their final two weeks in London, the students participated in sessions on business model analysis to learn about entrepreneurship at the Imperial Business School.“ They were able to produce advanced solutions using facilities at Imperial College London,” says Elias. “They had one on one support of the faculty members and staff at Imperial. They were exposed to the best facilities that Imperial had to offer.”

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“We have also added data science and AI as a key component of the 2024 programme,” Elias adds. The final projects from the programme included solutions such as AI-assisted smart glasses to improve the quality of life for those with hearing loss, and EcoBin, a fully integrated smart bin that deploys machine learning, solar power and behavioural economics to improve waste management in Saudi Arabia, and an AI-embedded tile that harnesses kinetic energy from footsteps into electricity.

These practical innovations in sustainability demonstrate how outcomes from strategic partnerships can support universities’ broader ambitions to increase their social impact. The PSAU-Imperial summer training programme is an example of how academic partnerships can play a pivotal role in tackling important global issues, highlighting the potential for higher education to drive meaningful social impact and advance progress toward the SDGs.

PSAU engineering students walk down the green atrium at the University City in Al-Kharj, Saudi Arabia.

Find out more about SDG education at Prince Sattam Bin Abdulaziz University.