# Sustainability Literacy Survey 2025

**July 2025**

**HKUST**

**Authored by: Sustainability / Net-Zero Office**

# 1 Introduction

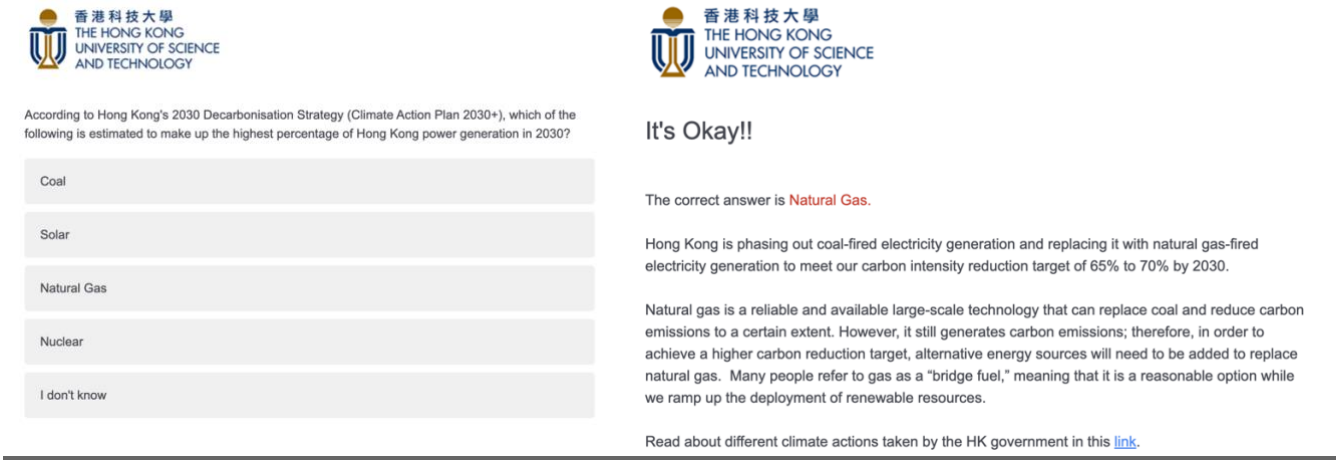
## Goal and Format

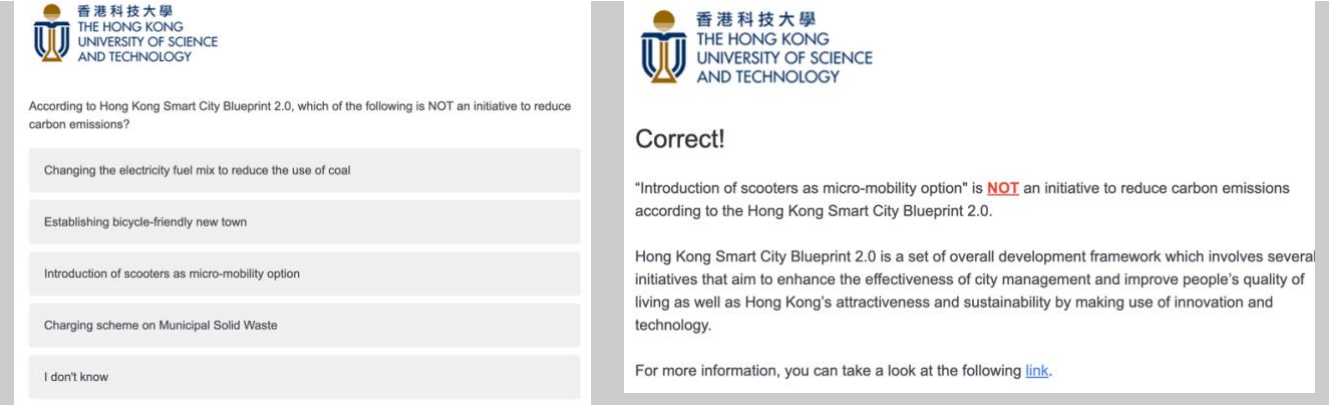
Sustainability Literacy Quiz survey (total of 19 questions) is developed to assess HKUST students' and staff's understanding of sustainability. Sustainability literacy is essential for preparing individuals to address sustainability challenges and contribute to HKUST's net-zero action plan by 2045. To track our progress and further improve sustainability education and operations, we conducted a **Sustainability Literacy Survey** that not only measures sustainability literacy across our community but also serves as an educational tool.

This year, expanding on our 2021 Sustainability Literacy Quiz survey that exclusively targeted HKUST UG students, we have broadened the measurement pool to include all staff (academic and non-academic), as well as post-graduate and PhD students. By evaluating the ability to learn and retain key concepts of sustainability, we gain valuable insights into the effectiveness of our educational and operational sustainability initiatives.

Refer to Figure 1 for examples of the quiz questions and answers, and Appendix 2 for full list of questions.

Figure 1: Screenshots of questions/answers in quiz






## Methodology

HKUST employs recognized methodology to assess understanding of the interconnectedness of government policies, social concepts and environmental concepts. We have identified material sustainability topics to include UN SDGs, climate change basics, ESG issues, systems thinking, global poverty and social equity. This aligns with Hong Kong's strategic climate directives like Hong Kong's Climate Action Plan 2050, Climate Action Plan 2030+, and Hong Kong Smart City Blueprint 2.0.

With reference to the guidelines from Association for the Advancement of Sustainability in Higher Education (AASHE), tailored questions are designed by HKUST faculty and Sustainability / Net-Zero Office to assess our community's understanding of these issues. Our assessments comprised of multiple-choice questions, with explanation and references for "correct", "incorrect" and "I don't know" responses. Shared with all staff and students.

# 2 Results and Analysis

This year, our Sustainability Literacy Survey expanded its reach to provide a detailed analysis of two key groups: students and staff. This segmented approach allows us to identify targeted opportunities for enhancing our educational and operational sustainability initiatives.

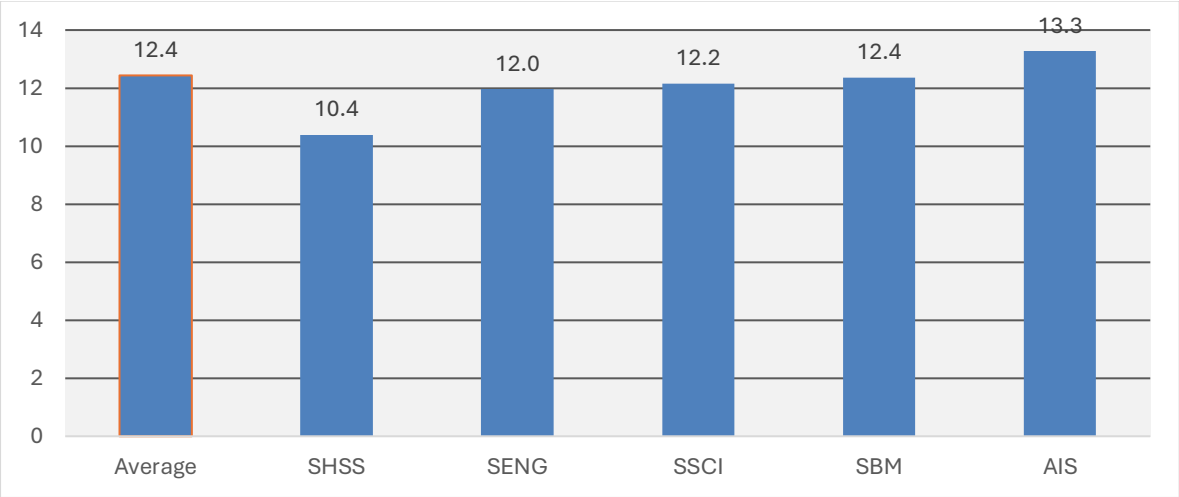
## 2.1 Student

### 2.1.1 By School

With the Sustainability Literacy Quiz results collected this year, the following key figures are observed:

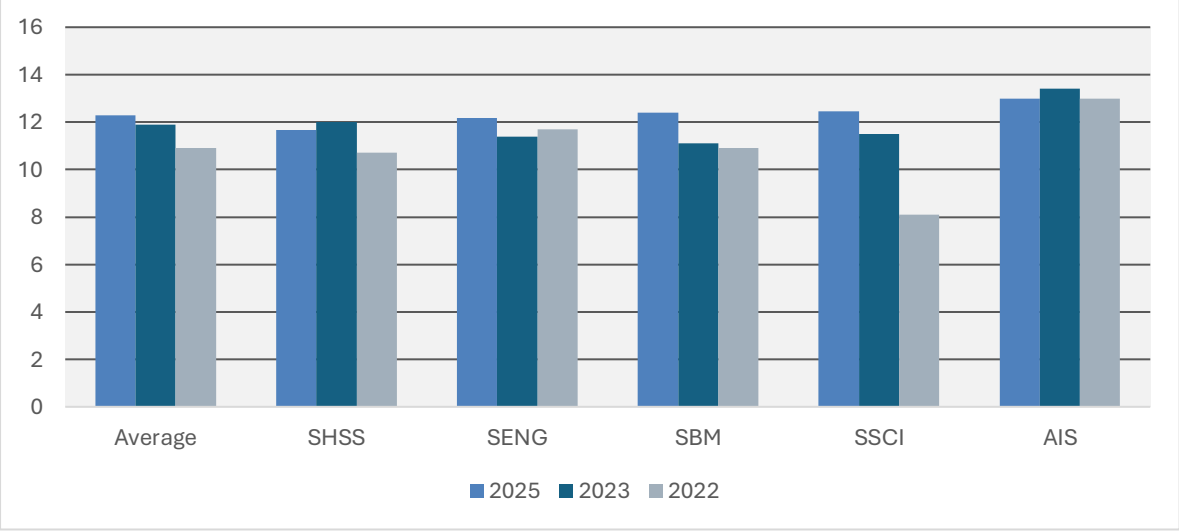
- Students in School of Humanities and Social Science have lower average scores, while Academy of Interdisciplinary Studies students register highest scores.

*Figure 1: Results by School (School of Humanities and Social Science - SHSS, School of Engineering - SENG, School of Business and Management SBM, School of Science - SSCI, and Academy of Interdisciplinary Studies - AIS for all students)*




- The overall average score has increased steadily from 2022 to 2025. A general improvement is observed in performance across all schools.
- SSCI, SBM, and SHSS recorded significant growth over the years.

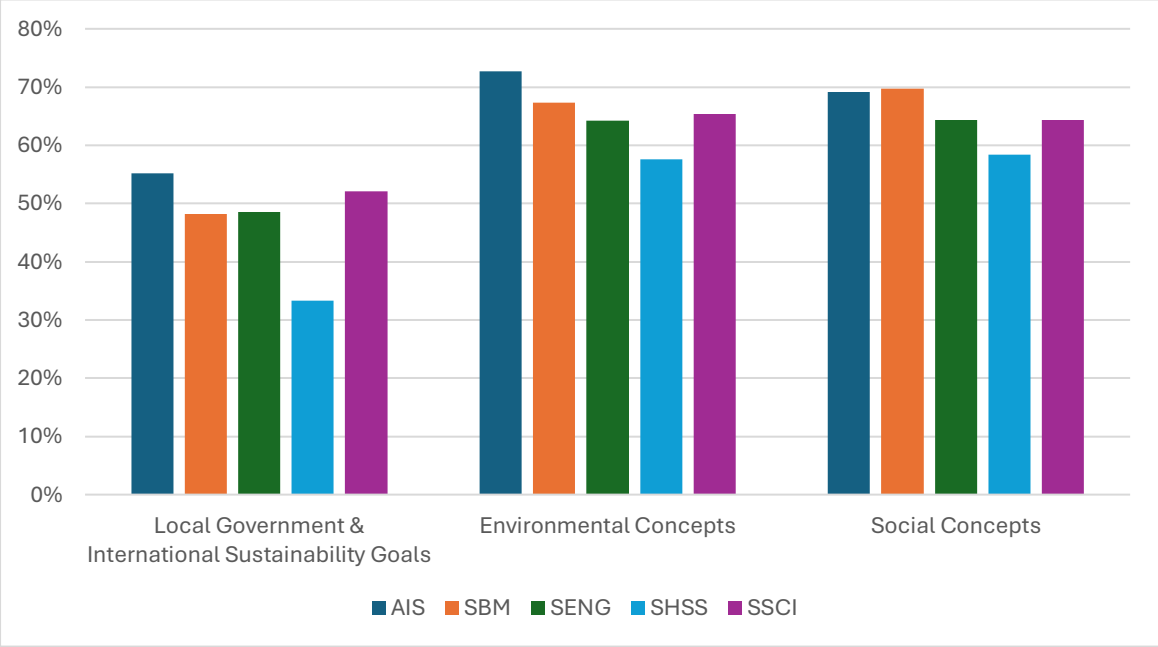
*Figure 2: Results by School Comparing 2022 & 2023 (only for undergraduates)*




Upon analyzing the results based on the questions, they can be categorized into three distinct groups. They are **"Local Government & International Sustainability Goals"**, **"Environmental Concepts",** and **"Social Concepts"**. The following key trends are observed.

- **“Local Government & International Sustainability Goals”** is the lowest performing topic overall, especially for SHSS (33.3%), SBM(48.2%) and SENG (48.6%). AIS (55.2%) and SSCI (52.1%) performed relatively better, above 50%.
- **“Environmental Concepts”** is the best performing topic across all schools. AIS students performed the highest at 72.7%, followed by SBM (67.3%) and SSCI (65.4%).
- **The “Social Concepts”** topic consistently demonstrates strong performance across all schools.

*Figure 5: Results by Question Categories by School (Student)*

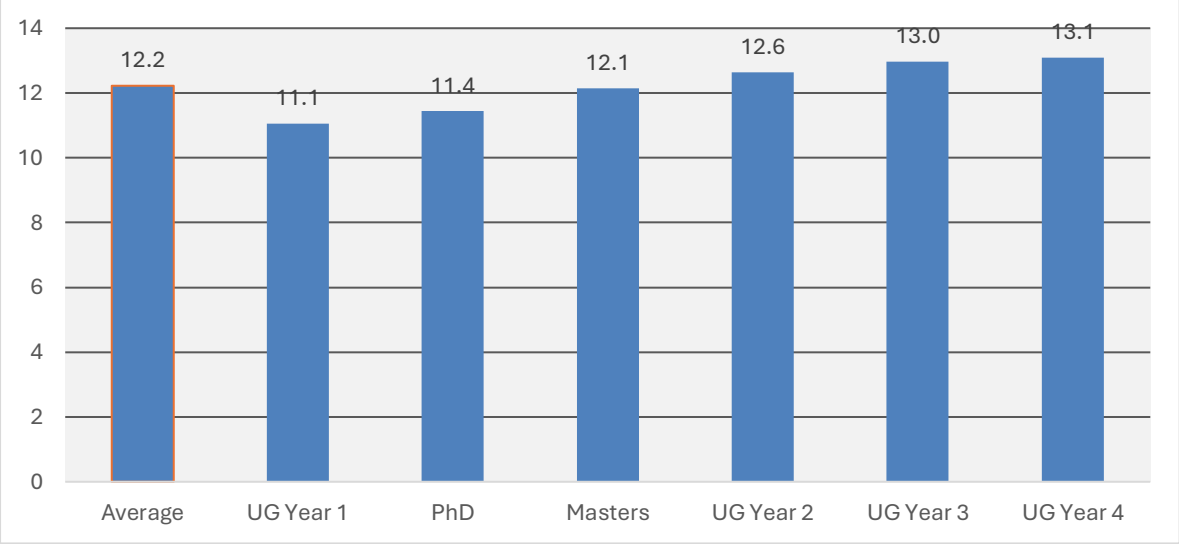



*Please refer to Appendix I for the comprehensive version of the survey results.*

## 2.1.2 By Year Group

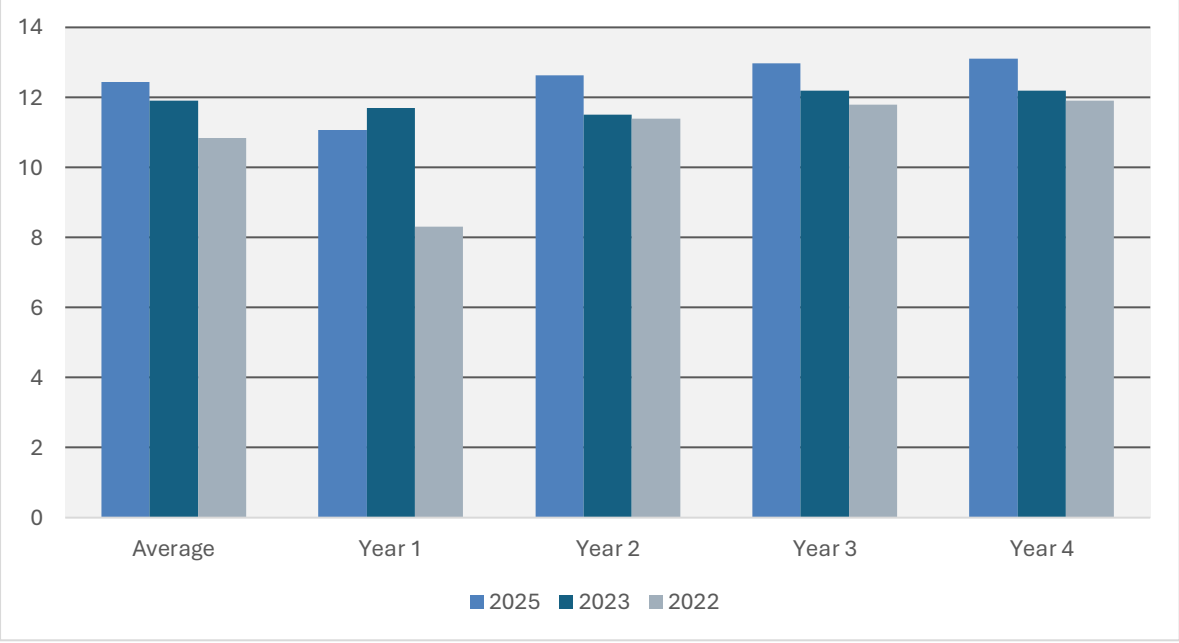
This year, PhD and Master Students are invited in the survey. On average, the Year 3 (Score: 13.0) and 4 (Score: 13.1) students score better than other year groups.

*Figure 3: Results by Year Group (All UG Year, PhD, Masters)*




The overall average score from Year 2 to Year 4 has shown consistent improvement, with Year 1 showing significant improvement. The gap between year groups is narrowing over year groups.

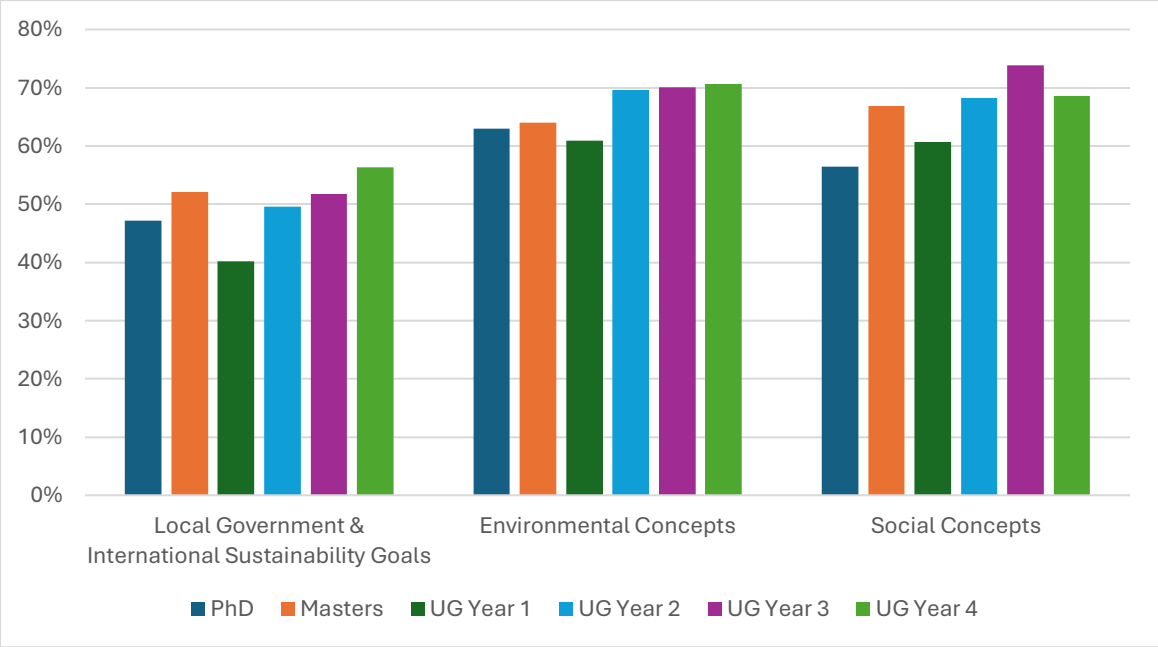
*Figure 4: Results by Year Group Comparing 2022 & 2023 (only for undergraduates)*



The following key trends are observed across academic levels:

- **"Local Government & International Sustainability Goals"** is the lowest performing topic overall, especially for UG Year 1 (40.2%).
- **"Environmental Concepts"** is the best performing topic across all schools. Gradual improvement is found from UG1 (60.9%) to UG4 (70.6%), peaking at UG3 and UG4.
- UG3 (73.9%) and UG4 (68.6%) lead the **"Social Concepts"** topic.

*Figure 6: Results by Question Categories by Year Group (Student)*




*Please refer to Appendix I for the comprehensive version of the survey results.*

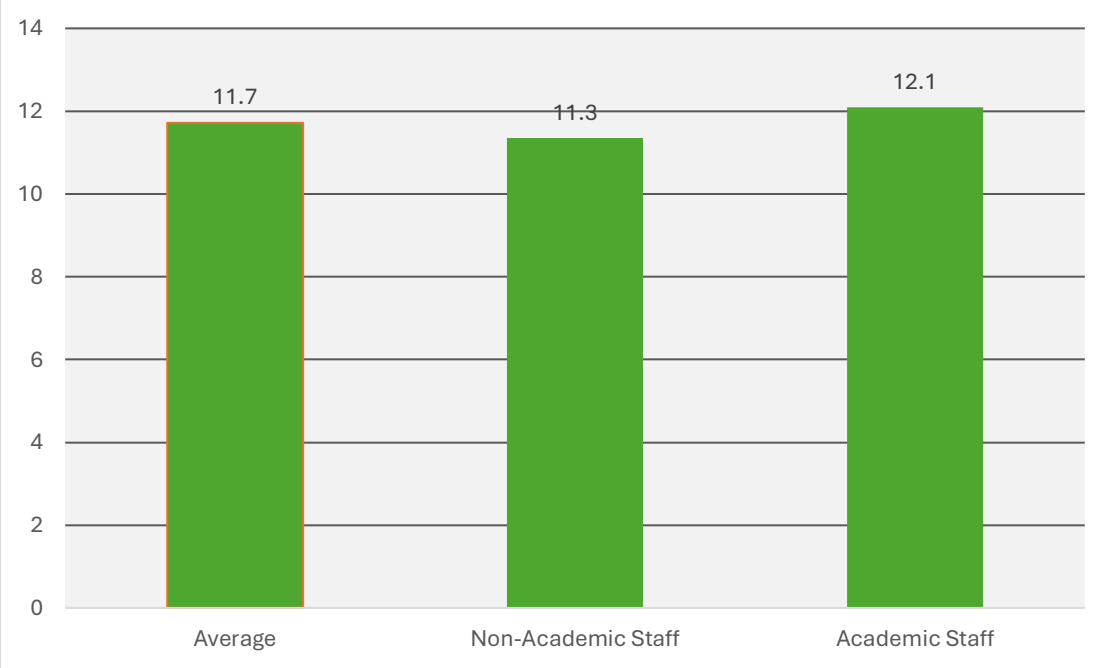
## 2.2 Staff

For staff, responses were categorized into academic and non-academic groups, offering insights into how sustainability concepts are understood within distinct professional roles.

### 2.2.1 By Professions/ Roles

Academic Staff outperformed Non-Academic Staff by 0.8 points.

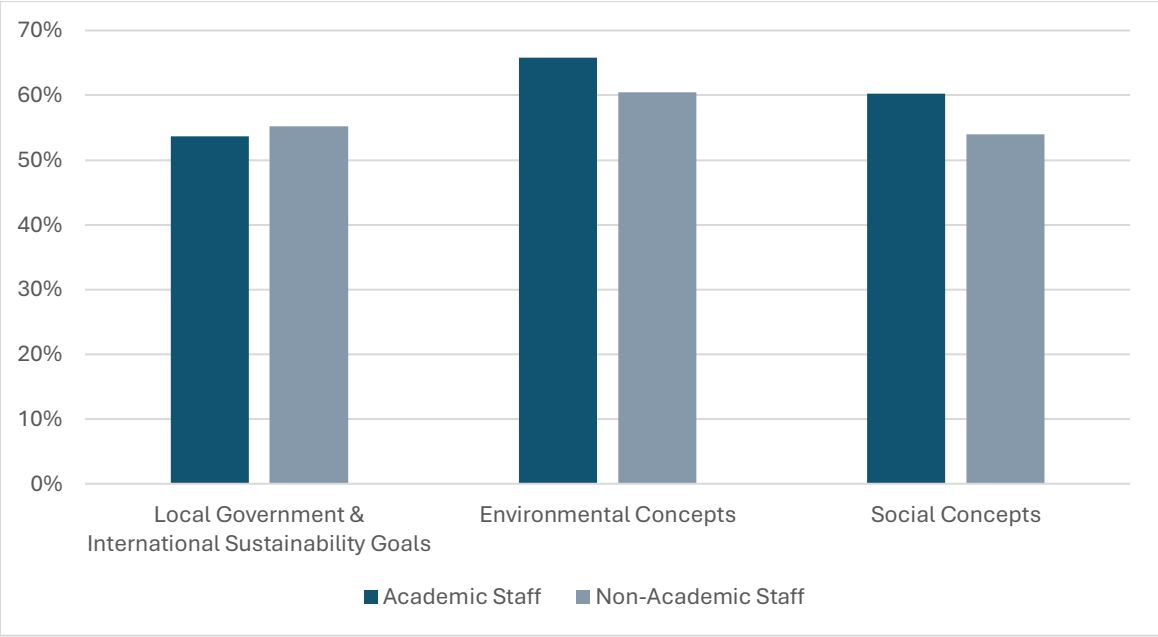
*Figure 7: Results by Roles (academic staffs, non-academic staffs)*




The following key trends are observed by profession.

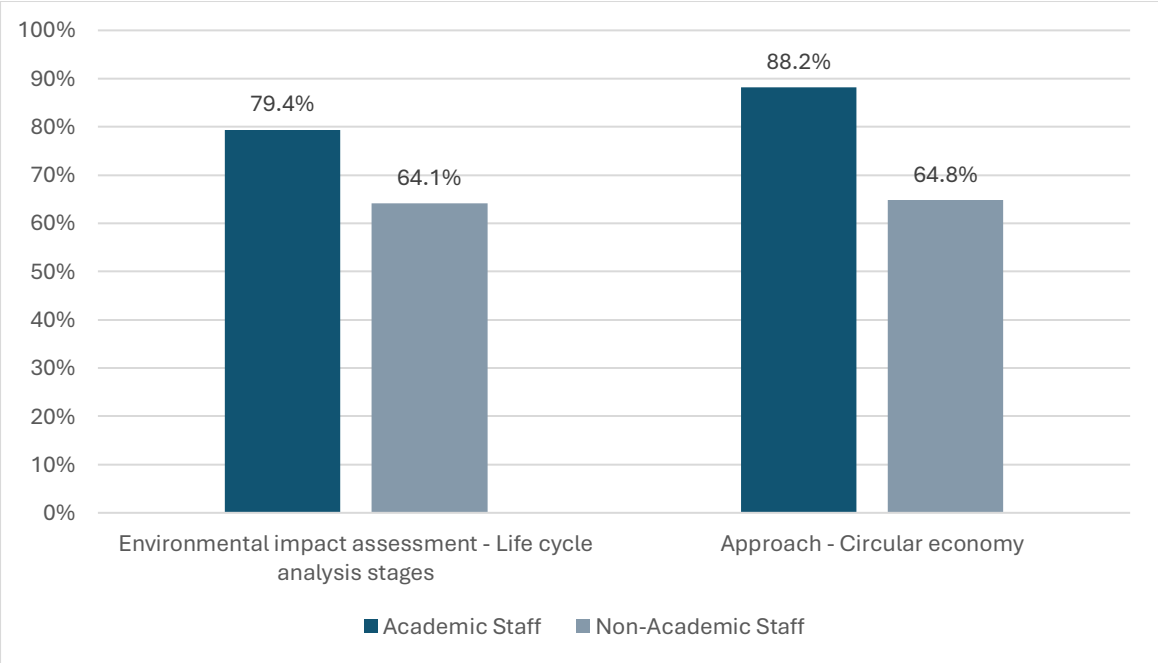
- Non-Academic Staff slightly outperformed Academic Staff in **"Local Government & International Sustainability Goals"** topic
- Academic Staff performed significantly better in **"Environmental Concepts"** and **"Social Concepts"** topic.

*Figure 8: Results by Question Categories (Staff)*




- Largest performance gaps are found at “Life Cycle Analysis Stages” (+15.3%) and “Circular Economy” (+23.4%) between academic staff and non-academic staff.

*Figure 9: Performance Gaps between Staff groups (“Life Cycle Analysis Stages” (+15.3%) and “Circular Economy” (+23.4%))*



# 3 Conclusion and Recommendations

To raise overall sustainability literacy among our community, especially staff, the following recommendations are proposed.

1. **Online Self-Learning Modules for Non-Academic Staff – Life Cycle Thinking and Circular Economy**

To enhance staff capacity in key sustainability approaches by addressing major knowledge gaps, online self-learning modules for staff is one of the recommendations. The University targets to enhance engagement to address the two largest performance gaps ("Life Cycle Analysis Stages" and "Circular Economy") between academic staff and non-academic staff.

Online modules hosted on portals offer self-paced and interactive learning experiences, aiming to build a common sustainability language across departments.

2. **Enhance Engagement through Sustainability Seminars, Workshops, and Orientation Programs**

For staff, a series of initiatives is recommended to cultivate the culture of sustainability. These include seminars and workshops that connect sustainability concepts to daily operations, such as environmental policy updates, specific SDG topics, and Campus Swap second-hand goods trading platform. Also, new staff orientation program is encouraged to incorporate a sustainability segment to ensure new employees understand our current campus green initiatives and goals.

## Appendix I: Score results for Sustainability Literacy Quiz (2022, 2023, 2025)

Results for all year groups in 2022

| **2022** | Average | AIS/IPO | SBM | SENG | SHSS | SSCI |
|---|---|---|---|---|---|---|
| Year 1 | 8.3 | 11.5 | 10.2 | 10.1 | 9.3 | 0.4 |
| Year 2 | 11.4 | 11.5 | 11.6 | 11.8 | 12.3 | 10 |
| Year 3 | 11.8 | 14.8 | 11 | 12.7 | 8.7 | 11.6 |
| Year 4 | 11.9 | 14 | 10.6 | 12 | 12.5 | 10.4 |
| Count: 302 | 10.9 | 13.0 | 10.9 | 11.7 | 10.7 | 8.1 |
| | | | | | | |

Results for all year groups in 2023

| **2023** | Average | AIS/IPO | SBM | SENG | SHSS | SSCI |
|---|---|---|---|---|---|---|
| Year 1 | 11.7 | 10.9 | 11.1 | 12.1 | 13.5 | 10.8 |
| Year 2 | 11.5 | 13.2 | 11.3 | 11.1 | 11.0 | 11.1 |
| Year 3 | 12.2 | 14.5 | 11.1 | 10.6 | 12.2 | 12.6 |
| Year 4 | 12.2 | 14.9 | 11.2 | 11.9 | 11.3 | 11.6 |
| Count: 258 | 11.9 | 13.4 | 11.1 | 11.4 | 12.0 | 11.5 |

Results for all year groups in 2025

| **2025** | Average | AIS/IPO | SBM | SENG | SHSS | SSCI |
|---|---|---|---|---|---|---|
| Year 1 | 11.1 | 10.5 | 11.3 | 10.9 | | 11.1 |
| Year 2 | 12.6 | 12.4 | 12.9 | 13.0 | 8.0 | 11.3 |
| Year 3 | 13.0 | 13.4 | 12.4 | 12.9 | 13.5 | 14.6 |
| Year 4 | 13.1 | 14.3 | 13.4 | 12.1 | | 13.8 |
| Masters | 12.1 | 13.5 | 11.9 | 12.1 | 9.8 | 12.3 |
| PhD | 11.4 | 14.1 | 16.0 | 10.1 | | 11.1 |
| Count: 304 | 12.3 | 13.3 | 12.4 | 12.0 | 10.4 | 12.2 |

## Appendix II: Question Correctness for Students (by school group)

| By Topic | AIS | SBM | SENG | SHSS | SSCI | PhD | Masters |
|---|---|---|---|---|---|---|---|
| **Local Government & International Sustainability Goals** | 55.2% | 48.2% | 48.6% | 33.3% | 52.1% | 47.2% | 52.1% |
| **Environmental Concepts** | 72.7% | 67.3% | 64.2% | 57.6% | 65.4% | 63.0% | 64.0% |
| **Social Concepts** | 69.2% | 69.7% | 64.4% | 58.3% | 64.3% | 56.5% | 66.9% |

## Appendix III: Question Correctness for Students (by year group)

| By Topic | PhD | Masters | UG Y1 | UG Y2 | UG Y3 | UG Y4 |
|---|---|---|---|---|---|---|
| **Local Government & International Sustainability Goals** | 47.2% | 52.1% | 40.2% | 49.5% | 51.7% | 56.4% |
| **Environmental Concepts** | 63.0% | 64.0% | 60.9% | 69.6% | 70.0% | 70.6% |
| **Social Concepts** | 56.5% | 66.9% | 60.7% | 68.2% | 73.9% | 68.6% |

## Appendix IV: Question Correctness for Staff

| By Topic | Academic Staff | Non-Academic Staff |
|---|---|---|
| **Local Government & International Sustainability Goals** | 53.7% | 55.2% |
| **Environmental Concepts** | 65.8% | 60.4% |
| **Social Concepts** | 60.3% | 54.0% |

# Appendix V: Question and Answer List

| | | | |
|---|---|---|---|
| What is the difference between a Living Wage and a Statutory Minimum Wage?<br>They are the same thing<br>The statutory minimum wage is always higher<br>**The living wage reflects the actual amount of income needed to meet basic needs**<br>The living wage is a legally binding regulation<br>I don't know | "Futures thinking" is an important concept in sustainability. Which of the following is NOT considered a "Futures Thinking" exercise?<br>Scenario planning<br>**Payback analysis**<br>Forecasting and back-casting<br>Life cycle cost analysis<br>I don't know | Which of the following is NOT an example of a Polluter Pays Principle-based policy?<br>Municipal Solid Waste (MSW) charging<br>**Incentive schemes for bringing your own bottle**<br>Deposit fee for bottles<br>Carbon Tax<br>All of the above<br>I don't know | What statement is NOT true about the UN's Sustainable Development Goals (SDGs) initiative?<br>It was adopted by all of the UN member states<br>It recognizes that eradicating poverty is the greatest global challenge and a key to healing our planet<br>It aims to ensure that all human beings can enjoy prosperous and fulfilling lives<br>**It is in direct competition with the Millennium Development Goals**<br>I don't know |
| The Urban Heat Island Effect is:<br>The trend of people moving from rural areas moving to urban areas<br>The increase in temperature in tropical urban areas caused by climate change<br>An increase in the number of cities that reduce exports and imports during hot summer months<br>**A higher of temperature in urban areas due to the density of buildings, the sparseness of greenery and other human activities.**<br>All of the above<br>I don't know | In order to prevent the worst effects of global climate change, scientists recommend that we:<br>Eliminate the emissions of greenhouse gases by 2050<br>Emphasize the deployment of renewable energy resources<br>Eat less meat and dairy<br>Focus on increasing the efficiency of buildings and transportation systems<br>**All of the above**<br>I don't know | According to Hong Kong Smart City Blueprint, which of the following is NOT an initiative to reduce carbon emissions?<br>Changing the electricity fuel mix to reduce the use of coal<br>Establishing bicycle-friendly new town<br>**Introduction of scooters as micro-mobility option**<br>Charging scheme on Municipal Solid Waste<br>I don't know | Which of the following is NOT a characteristic of a circular economy?<br>Closed-loop system<br>Waste are regenerated into raw materials<br>**Extra costs for manufacturers**<br>Minimizing the use of resource inputs<br>I don't know |
| A technique to assess environmental impacts associated with all the stages of a product's life from cradle to grave (resource extraction through usage and disposal), is called:<br>An annual review<br>**A life cycle analysis**<br>An energy audit<br>A system analysis<br>I don't know | Environmental, Social Governance (ESG) reporting is now required by companies listed on the Hang Seng Stock Exchange. What is an example of a topic included in a typical ESG report?<br>Labor practices<br>Greenhouse gas inventory<br>Community service<br>Performance data and KPIs<br>**All of the above**<br>I don't know | Which of the following are principles of systems thinking?<br>It views individual elements within a larger, more complex system<br>It addresses problems in a way that does not create new problems in the future<br>It considers the impact and consequences of actions over time<br>It allows us to understand how our actions are influenced by something else<br>**All of the above**<br>I don't know | "Living within our planetary boundaries" means:<br>Using natural resources as slowly as possible<br>**Using only as much resources as can be replaced by natural processes**<br>No introducing new technology too quickly<br>Discovering new resources to allow maximum economic growth<br>I don't know |
| Which of the following is NOT a stage in life-cycle analysis?<br>Disposal<br>**Habitat Conservation**<br>Product Use<br>Raw Material Production<br>I don't know | The Human Development Index (HDI) was developed as an alternative to use economic growth as a measurement of the health and development of a country. Which of the following is NOT included in the HDI?<br>Life expectancy<br>**$CO_2$ Emissions**<br>Literacy Rate<br>GDP per capita<br>I don't know | Which of the following statements about greenhouse gases is FALSE?<br>**Humans would be better off without greenhouse gases**<br>Greenhouse gases trap part of the heat from escaping back into space<br>Without fossil fuels, the concentration of greenhouse gases would be largely constant within the atmosphere<br>There are several other greenhouse gases in addition to carbon dioxide<br>All of the above are TRUE<br>I don't know | According to Hong Kong 2030 Decarbonisation Strategy, which of the following is estimated to make up the highest percentage of Hong Kong power generation in 2030?<br>Coal<br>Solar<br>**Natural Gas**<br>Nuclear<br>I don't know |

| | | | |
|---|---|---|---|
| Which is NOT an accurate goal of the "Fair Trade" movement?<br>To guarantee local producers a fair, stable price for products like coffee, chocolate, and handicrafts<br>To develop longer-term trading relationships between local suppliers and wholesalers<br>To designate a recognizable brand to help consumers make more sustainable choices<br>**To maximize the consumption of local natural resources**<br>I don't know | When adopted in 1948, The Universal Declaration of Human Rights was considered a great achievement because:<br>**For the first time in history, it identified a set of fundamental human rights to be universally protected**<br>It declared that all human beings are born free and equal in dignity and rights<br>It expressed that everyone has the right to express their opinions freely and without interference<br>The articles have formed the foundation for numerous international treaties and national constitutions<br>I don't know | | |