

SDG Accord Case Study



OLLSCOIL NA GAILLIMH
UNIVERSITY OF GALWAY



Integration of SDGs in

- Institutional governance/strategic level
- SDGs in research
- SDGs in campus operations
- SDGs in curriculum development
- SDGs in student engagement activities
- SDGs into community activities
- SDGs at a whole-institution level

Focus on

- Goal 1 - No poverty
- Goal 2 - Zero hunger
- Goal 3 - Good health and wellbeing
- Goal 4 - Quality education
- Goal 5 - Gender equality
- Goal 6 - Clean water and sanitation
- Goal 7 - Affordable and clean energy
- Goal 8 - Decent work and economic growth
- Goal 9 - Industry, innovation and infrastructure
- Goal 10 - Reduced inequalities
- Goal 11 - Sustainable cities and communities
- Goal 12 - Responsible consumption and production
- Goal 13 - Climate action
- Goal 14 - Life below water
- Goal 15 - Life on land
- Goal 16 - Peace, justice and strong institutions
- Goal 17 - Partnerships for the goals

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Summary:

The SDG Curriculum Assessment Tool or CAT is an output from a research project carried out in the SFI MaREI Centre at the University of Galway. The purpose of this tool is to measure a baseline of Education for Sustainable Development (ESD) in modules taught at Higher Education Institutions (HEIs). It achieves this through scanning for keywords within learning outcomes from modules. The research group at the University of Galway carried out a critical analysis of over 12,000 SDG related keywords from five different SDG keyword lists that were compiled by other research groups. This critical analysis resulted in a smaller list of keywords, which also were labelled by their relevancy as either focussed or supportive. The methodology also involved the use of ChatGPT to enrich the shorter keyword list with contextually relevant synonyms. Definitions for sustainability focussed and sustainability supportive learning outcomes were adopted from the STARS 2.2 Technical Manual. STARS stands for the Sustainability Assessment Tracking and Rating System, an online platform on which hundreds of HEIs have submitted reports detailing their progress on sustainability on campus. Aligning the keywords with STARS definitions means the Curriculum Assessment Tool could be used for a STARS application by an institution. At the University of Galway, the tool was used in conjunction with a survey of staff in the College of Science and Engineering, where staff were asked to rate their modules in terms of focussed or supportive SDG coverage. Results showed that the SDG baseline measured by the CAT was strongly correlated with the SDG baseline created by staff in the survey, showing the robustness of the tool. The CAT was also used to conduct a cross-institutional analysis of Civil Engineering degree programmes from seven HEIs across Ireland. Results show consistency in the programmes with the SDGs that have the highest coverage being SDGs 6, 7, 11 and 13. Further details about the SDG Curriculum Assessment Tool can be found in the paper by Adams and Goggins [1].

Outline the 3 key benefits of integrating this theme:

1. Implementing Education for Sustainable Development into education systems has become part of the agenda for institutions and governments alike. In Ireland, the government published the second national strategy on education for sustainable development in 2022, proceeding the first strategy from 2018. As outlined in SDG target 4.7, ESD aims to ensure that everyone acquires the knowledge and skills to promote sustainable development. This is core to achieving the SDGs. The measurement of an ESD baseline gives the institution a starting point from which to create an implementation plan and begin integrating the theme of ESD.
2. Utilising an automated tool for the baseline creation has added benefits such as automation and consistency. The tool automates the process of reviewing learning outcomes, something that used to be an intensive manual process.
3. The tool is consistent in its methodology and so can be used to create baselines across multiple programmes, colleges or institutions. This means it can be used for internal analysis or cross-institutional comparisons.

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Outline the barriers or challenges encountered in integrating this theme and how you overcame these:

1. There were a number of challenges surrounding the SDG keywords. Initially it was found that many keywords were hit in a context that was not related to the SDG it was assigned. Some keywords were also mostly hit in an SDG supportive context rather than an SDG focussed context. A critical review of the keywords was carried out to overcome this barrier.
2. After the critical analysis of the keywords, the list was reduced to just over 200 keywords. These words were all crucial to the functionality of the tool and had been given relevancy labels (supportive of focussed). However, it was found that 1,000-2,000 keywords was the most effective size for the list. To overcome this barrier, ChatGPT was asked to provide “synonyms in the context of the assigned SDG” for each of the 200+ crucial keywords. This brought the word count up to just under 1,200, while preserving the progress that had been made in identifying these crucial words.
3. A third challenge the project faced was the availability of learning outcome material. The university uses a curriculum management software system (Akari) for storing and updating module information. However, when information from over 3,500 modules was downloaded, it was found that just over 1,900 of them didn't have learning outcomes uploaded to the system. Encouraging module owners to upload up to date learning outcomes to the Akari system was challenging.

Please outline your conclusions and recommendations to others:

To conclude, ESD is growing ever more important to educational institutions and to the achievement of the SDGs. Governments around the world have published national ESD implementation plans, and many institutions have committed to embedding sustainability into all of their programmes and modules. Measuring a baseline of the level of ESD that is already present in a curriculum is very useful for the creation of an ESD implementation plan. The curriculum assessment tool provides an automated and consistent method for carrying out this baseline measure. Research has shown the keyword list can be applied to multiple institutions without showing bias towards the institution in which it was created. It has also been shown that the tool aligned with the opinions of module owners in terms of where the SDGs lie in their modules. At this stage, it is recommended to use this tool to measure an ESD baseline for any module(s)/programme(s)/college(s)/institution(s) as desired, and to review at least a sample of the results to ensure accuracy. More analysis of the performance of the tool is needed to guarantee accuracy, so at this stage it can be used to indicate where the SDGs may lie, but this should be reviewed before officially claiming that the SDG is covered in the module. Once the baseline is measured and reviewed, it can be analysed to find gaps and opportunities for further ESD implementation.