

# Higher Education for Sustainability

## A Report





**HÍ** SJÁLFBÆRNISTOFNUN

## **Higher Education for Sustainability**

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The “Higher Education for Sustainability” project was led by the School of Education and the Sustainability Institute at the University of Iceland. It was funded by the University of Iceland Research Fund.

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## Summary

The "Higher Education for Sustainability" (HighES) project, led by the School of Education and the Sustainability Institute at the University of Iceland, was designed to enhance the integration of sustainability within higher education teaching practices. Funded by the University of Iceland Research Fund in 2022, this two-year initiative aimed to identify, and share different ways to embed sustainability into curricula, pedagogy, and institutional operations.

The project's primary aims were to make existing sustainability practices more visible, encourage their wider adoption, and introduce interdisciplinary and dialogical approaches to curriculum reform. It sought to support educators in incorporating sustainability into a broad range of disciplines, including those not traditionally associated with the topic.

The project's methodology combined interviews and a workshop. Eleven educators from all five schools of the University participated in interviews, providing insights into their experiences with sustainability in teaching, including the methods they used, the challenges they faced, and opportunities for further development. These findings informed a workshop where participants explored practical strategies for integrating sustainability into teaching, discussed interdisciplinary approaches, and shared best practices.

The findings revealed the importance of experiential learning, active student involvement, and interdisciplinary collaboration. Participants highlighted significant challenges, such as time constraints, limited resources, and lack of expertise. There was a clear call for greater institutional support, including professional development opportunities, formal recognition of efforts, and the provision of resources tailored to sustainability education.

The project led to several key recommendations. For teachers, fostering collaboration with colleagues, gradually incorporating sustainability into existing courses, and involving students in course design were emphasised. For the university, the establishment of centralised resources, the inclusion of sustainability as compulsory content in the HE Teaching Diploma, provision of incentives for sustainability-focused teaching, and consideration of a compulsory sustainability course for all students were identified as priorities.

The HighES project underscores the vital role of universities in advancing sustainability education. Its findings and recommendations provide a foundation for continued efforts to strengthen sustainability practices within the University of Iceland and higher education more widely.

## Samantekt

Verkefninu „Háskólamenntun til sjálfbærni“ (HighES) var ætlað að styðja við og efla samþættingu sjálfbærni í kennsluháttum á háskólastigi. Það var leitt af Menntavísindasviði og Sjálfbærnistofnun Háskóla Íslands og hlaut styrk úr Rannsóknasjóði Háskóla Íslands. Verkefnið vann að því að bera kennsl á og miðla ólíkum leiðum sem nýta má til að koma sjálfbærni inn í námskrár, kennslufræði og starfsemi HÍ.

Helstu markmið verkefnisins voru að draga fram og gera sýnilega þá þekkingu og aðferðir sem nýst hafa í kennslu á sjálfbærni í HÍ, hvetja til viðtækari upptöku þeirra og innleiða þverfaglegar og samræðumiðaðar nálganir í námskrárþróun. Leitast var við að styðja kennara við að innleiða sjálfbærni í kennslu á fjölbreyttum sviðum, þar á meðal í greinum sem ekki tengjast hefðbundið sjálfbærni.

Aðferðafræði verkefnisins byggði á viðtölum og vinnustofu. Ellefu kennarar frá öllum fimm fræðasviðum HÍ tóku þátt í viðtölum þar sem þau deildu reynslu sinni af sjálfbærni í kennslu, þar á meðal aðferðum sem þau beittu, áskorunum sem þau hafa mætt og tækifærum til frekari þróunar. Niðurstöður viðtalanna lögðu grunn að vinnustofu þar sem þátttakendur skoðuðu hagnýtar leiðir til að samþætta sjálfbærni í kennslu, ræddu þverfaglegar nálganir og deildu góðum starfsháttum.

Niðurstöðurnar undirstrikuðu mikilvægi reynslunáms, virkrar þátttöku nemenda og þverfaglegrar samvinnu. Þátttakendur bentu á ýmsar áskoranir, þar á meðal tímaskort, takmarkað aðgengi að úrræðum og skort á sérfræðiþekkingu. Einnig kom skýrlega fram þörf fyrir aukinn stuðning, meðal annars í formi símenntunar, formlegrar viðurkenningu á frumkvæði kennara og aðgengi að úrræðum sérsniðnum að sjálfbærnikennslu.

Verkefnið leiddi til mótunar nokkurra lykiltillagna til að styðja við eflingu sjálfbærnikennslu í Háskóla Íslands. Fyrir kennara var lögð áhersla á að efla samstarf við samstarfsfólk, samþætta sjálfbærni smám saman inn í núverandi námskeið og virkja nemendur í námskeiðahönnun. Fyrir háskólann sjálfan voru forgangsatriðin talin vera: að koma á fót miðlægum úrræðum, skilgreina sjálfbærni sem skyldunámskeið í örnámi í kennslufræði háskóla, þróun hvatakerfis fyrir kennslu með áherslu á sjálfbærni og að skoða möguleika á skyldunámskeiði í sjálfbærni fyrir alla nemendur.

HighES-verkefnið undirstrikar mikilvægt hlutverk háskóla í að efla menntun til sjálfbærni. Niðurstöður verkefnisins og tillögur leggja grunn að áframhaldandi vinnu við að styrkja sjálfbærni í starfsemi Háskóla Íslands og háskólastofnunar almennt.

## Introduction to the project

The Higher Education for Sustainability (HighES) project, proposed by Prof. Ólafur Páll Jónsson from the School of Education, was funded by the University of Iceland Research fund (*Rannsóknasjóður*) in 2022. The two-year project aimed at making more visible various practices and ideas that may help the University of Iceland – and other higher education institutions – to strengthen their work towards sustainability. The project aimed to change both educational and research practices from within, by building on what is already present, although often only implicitly or without receiving much attention. Therefore, the main method was one of eliciting ideas and practices as well as sharing ideas that have already been developed away from the mainstream, and advance new ways of educating with the aim of making the university as a whole, and the teaching aspect in particular, more firmly directed towards sustainability.

The project was a collaboration between members of the School of Education and the Sustainability Institute at the University of Iceland (*Sjálfbærnistofnun Háskóla Íslands*).

Aims of the project were:

- To make more **visible** various practices and ideas that may help the UI – and other higher education institutions – to **strengthen** their work towards sustainability.
- Change or transform educational practices from within by **building** on existing successful practices that often go unnoticed.
- To spot **opportunities** for meaningful engagement with sustainability in fields where sustainability issues are not necessarily at the surface.
- Take a **dialogical approach** to educational reform, acknowledging the **pluralism** of perspectives, ideas and intentions.
- The approach is one of eliciting, **sharing**, and discussing ideas and practices.
- Not only aim for the tangible deliverables of best practice examples but the less visible result of **engaged dialogue** about the essence of higher education in this time of crisis.

## Background to the project

### Sustainability in higher education

Universities, as research and teaching institutions, have an essential role in the transition towards sustainability, through generating new knowledge and by educating students to enable them to contribute to a sustainable future (Barth et al., 2016). As such, across the world, universities have incorporated sustainability into their policy, curricula, pedagogy, research, and campus operations.

Higher education must focus on developing the current and next generation of leaders with a sustainable mindset, that is reflected in the way to be, think and act (UN Higher Education Sustainability Initiative, 2022, p. 2).

Higher education for sustainability aims to equip learners at all levels with the relevant knowledge, skills, attitudes and values necessary for addressing current and future sustainability challenges. Sustainability is an institution-wide issue, rather than a curriculum topic consigned to specific fields such as environmental science or geography (Cotton & Winter, 2006). There is a need for universities to embed education for sustainability across disciplines, foster interdisciplinary approaches, and emphasise the relevance of sustainability to students' lives and future professions.

In terms of pedagogy, the most effective approaches have been experiential learning, real-life problem solving, internships and connection to the local community and wider society, service-learning, and harnessing the campus as a role-model for sustainability practices and innovation as well as fostering a culture of sustainability (Araneo, 2024; Thomas, 2014)<sup>1</sup>.

There is a need for greater investment in the professional development of university teachers. Limited faculty training and lack of institutional commitment and/or support are common barriers to higher education for sustainability (Akins et al., 2019; Leal Filho et al., 2018).

This research project focuses on the teaching and learning aspects of universities, including curricula, pedagogy, teaching methods and approaches. In particular, we wanted to explore how university teachers can be supported to incorporate sustainability into their teaching, especially teachers of subjects less commonly associated with sustainability.

## **Sustainability in teaching and learning at the University of Iceland**

Sustainability and diversity form one of the four main pillars of the University of Iceland's strategy for 2021-2026 (UI26). The strategy states, among other things, that *the University will lead the way in sustainability through teaching, research, and knowledge creation*. UI26 is implemented through different work programmes, including the Work Programme on Sustainability in Teaching, Research and University Management, whose implementation plan includes the following measures:

- Raise awareness and understanding of sustainability through presentations and workshops as well as through sustainability research and education dashboards,
- Focus on sustainability in teaching and learning by increasing the number of courses and support for teachers. Make study programmes and courses related to sustainability available for students from all disciplines,
- Work towards making the University carbon neutral by mapping emissions and introducing counter measures,

<sup>1</sup> Experiential learning is a pedagogical approach where learning occurs through direct experience and reflection, emphasising 'learning by doing'. Service learning is a participatory learning approach that involves students working with local, national, or international non-profit and public organisations on real, community-identified needs.

- Evaluate whether sustainability and interdisciplinarity should be taken into account when allocating grants from the University's competitive funds.

Efforts are underway to implement these measures by the end of the policy period, with status updates for each point available in [UI's Sustainability Reports](#). When it comes to sustainability in teaching and learning, UI, in cooperation with international partner universities in the Aurora University Alliance, has begun to systematically map the ways in which research and teaching contribute to the [Sustainable Development Goals](#) (SDGs). The findings will be presented on dashboards that provide a clear picture of the university's extensive contribution to these pressing challenges and will be used to support further development of UI's operations towards achieving the SDGs. As of November 2024, the Aurora SDG Research Dashboard is complete, and development of the SDG Education Dashboard is underway.

Previously, Auður Pálsdóttir, Associate Professor at School of Education and Lára Jóhannsdóttir, Professor in Environment and Natural Resources, conducted a research mapping courses at UI in relation to the SDGs: *[Signs of the United Nations SDGs in University Curriculum: The Case of the University of Iceland](#)* (Pálsdóttir & Jóhannsdóttir, 2021). The data was based on an analysis of course descriptions and learning outcomes for all courses listed in UI's course catalogue for the academic year 2019–2020.

UI, in cooperation with international partner universities in the Aurora University Alliance, has also developed a competence framework which encompasses the skills prioritised by the Aurora Universities that students should be able to acquire during their studies. The [LOUIS Competence Tool](#) aligns well with the competences that the United Nations have defined to be the competences required to achieve the 17 Sustainable Development Goals. In 2024, several workshops were conducted to support teachers in creating assessment tools aligned with the LOUIS competency framework.

The HighES project complements these initiatives but adopts a more participatory and practice-oriented approach.

## Methodology

The HighES project took a dialogical approach to educational reform, acknowledging the fact of pluralism of perspectives, ideas and intentions. Thus, the methods involved eliciting, sharing, and discussing ideas and practices, including those that had already been developed across the university and might help others at UI – and other higher education institutions – strengthen their work towards sustainability. The project used mainly two methods: in-depth, open, individual interviews, which were followed by a workshop to discuss preliminary findings and engage additional participants in collaborative group activities to refine ideas and share insights.



## Interviews

The first stage of the HighES project consisted of 11 in-depth, open interviews which were conducted in the spring 2024 with teachers at the University of Iceland, chosen through an open call to ensure a diverse participant pool. Interviewees represented all five schools within the university, spanning a range of seniority levels from adjuncts to full professors, with varying degrees of experience in integrating sustainability into their teaching practices. Following the interviews, a workshop was held to discuss preliminary findings and engage participants in collaborative group activities to refine ideas and share insights.

The interviews were semi-structured and guided by the following questions:

- What is sustainability in teaching to you?
- Content in teaching: Do you include sustainability/ SDG topics in your course content?
- Learning approaches: Do you use active-learning (problem/inquiry-based learning, case studies, collaborative learning, role play, debate/discussion, reflection tasks)?
- Competencies: Do you seek to develop students' sustainability competencies (systems thinking, future thinking, collaboration, critical thinking, integrated problem-solving, etc.)
- Whole-person approach: Do you seek to develop students' socio-emotional and behavioural learning?
- Curriculum design: Do you include or integrate SDGs when designing the curriculum for their course (*námskeið*) or programme (*námsleið*)?
- Learning outcomes and assessment: Are any of these related to sustainability content/SDGs? Are they related to any of the UNESCO key competencies?
- Interdisciplinarity: Do your courses work with multiple/interdisciplinary perspectives on sustainability?
- Project/community work: Do any of your courses involve practical projects or working with the community on sustainability issues?
- What kind of values guide your teaching?
- What do you do that might be useful for other teachers in their teaching? (practices)
- What challenges or difficulties have you faced in implementing sustainability in your teaching?
  - What prevents you from (further) implementing sustainability in your teaching?
- What could UI do to support you in this?
  - What do you need to be able to implement sustainability in your teaching?

The interviews were recorded and detailed notes were taken. Following completion of all the interviews, the two interviewers went through the notes and recordings and drew out commonalities as well as best practice examples regarding implementing sustainability in teaching in terms of teaching content and approaches, course and programme curriculum development, challenges and barriers to implementing sustainability in teaching, and how the University of Iceland can support teachers to implement sustainability in their teaching. The findings from the interviews are discussed below.

## Workshop

The second stage of the HighES project was a workshop held on the 22<sup>nd</sup> May 2023, where university teachers were invited to have an open dialogue about sustainability in teaching and how sustainability could be further integrated into teaching at the University of Iceland. The workshop gave the opportunity for participants to work together under guidance to implement sustainability in their teaching and their courses/programmes. Emphasis was placed on the sharing of experiences among teachers.

The workshop was open to all teaching staff at the university and was advertised through the Sustainability Institute. The workshop was attended by 12 participants from across all schools of the university.

The workshop comprised four parts:

1. **A presentation.** Project leaders introduced the HighES project and the initial findings from the interviews, including examples of what has been successful in terms of integrating sustainability into teaching.
2. **Group work sessions.** Workshop participants were divided into three small groups. Each group discussed two topics which were based on findings from the interviews.
  - **Working with the SDGs:** Content, evaluation, assignments, etc.
  - **Competences:** How to practically implement?
  - **Experiential and real-life learning:** How can you link to students' current lived experience? How do you make it a learning experience? How can you create a new learning experience?
  - **Course development:** Student involvement, assignments, project work, evaluation, content,
  - **Programme development:** Learning outcomes, content and sequencing
  - **Collaboration:** a) Inside UI: Interdisciplinarity – How can you connect to other spheres of sustainability? b) Outside UI: Nordic-, EU- and international networks, projects in the community.
3. **Voting on how the University of Iceland can support teachers in integrating sustainability in their teaching.** Participants were asked to vote on what actions the University of Iceland could take to support teachers in integrating sustainability in their teaching. Nine options were provided which were based on the findings from the interviews. Participants marked with sticky dots which actions they believed to be most important or fairly important. They did not place a marker on options they did not find to be important. Participants could add options, using a post-it note, if they felt something was missing, but none chose to do so. The list of actions voted on and the results can be found below.
4. **An open discussion including possible next steps following on from the project.** At the end of the workshop, an open discussion took place seeking to ascertain what would be most useful for teachers going forward, in terms of how the university can support them, including the possibility of more workshops through the Sustainability Institute.

## Findings from interviews

The findings below summarise the interview data, giving an overview of the experience of 11 University of Iceland teachers regarding implementing sustainability in their teaching. Common experiences as well as best practice examples discussed relating to teaching content and approaches, course and programme curriculum development, challenges and barriers to implementing sustainability in teaching, and how the University of Iceland can support teachers to implement sustainability in their teaching.

### What is sustainability in teaching to you?

Interviewees had slightly differing views of sustainability and sustainability in teaching. Many mentioned the SDGs and the 'three pillars' or 'spheres' of sustainability: environment, society and economy. Many stressed the importance of including all spheres of sustainability in their teaching. It was mentioned that some spheres come more naturally to each field of study but it is important to cover all spheres and connect them together e.g. there shouldn't be a focus solely on social issues without connecting these to the environment, and vice-versa. The need to view sustainability from both a global perspective and the local/Icelandic perspective was also mentioned. It was felt that the SDGs are not enough by themselves.

Many interviewees stressed the importance of moving beyond knowledge-based learning and focussing on taking action and the impact learners can have on society. It was felt that learning needs to connect to the students' lives. Related to these points, one interviewee referred to sustainability as 'a way of life' ('lífshættir').

Connection to nature or addressing the human-nature relationship was also mentioned as an important aspect of sustainability in teaching, thereby addressing the values and attitudes aspect of sustainability learning.

These different aspects of sustainability and sustainability in teaching are reflected in the approaches discussed below.

### Teachers used different frameworks to work with sustainability.

The interviewees use different frameworks to work with sustainability, the SDGs being the most common. However, some said it can be confusing with there being so many different frameworks and it can be difficult to choose which one to use. However, they felt it is good to see them as tools that can be utilized.

Frameworks mentioned:

- **UN SDGs:** 17 global goals established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. Goals include no poverty, quality education, gender equality, responsible consumption and production, climate action, and peace, justice and strong institutions.

- **UNESCO key competences:** Eight transversal sustainability competencies that are considered key for achieving the Sustainable Development Goals, e.g., systems thinking, collaboration, critical thinking and integrated problem-solving.
- **LOUIS framework:** A set of 16 competencies designed to strengthen the academic and personal learning outcomes in subject-oriented courses and programmes in university education. Competencies include civic engagement, creative thinking, teamwork and integrative learning.
- **Inner-development goals:** Five dimensions with 23 skills related to human inner growth and development considered essential for sustainable development. Developed as a not-for-profit initiative. The dimensions include: Relating – Caring for others and the world (e.g. connectedness, humility, compassion); Being – Relationship to Self (integrity, self-awareness).

## Teaching methods and approaches

Interviewees described different teaching methods and approaches of teaching sustainability, such as peer-learning, flipped classrooms, and connecting sustainability to the different subject matters at hand. Experiential learning and connecting to students' lives, as well as a small step integration are two approaches that will now be described in further detail.

### *Experiential learning and connecting to students' lives*

Various interviewees highlighted the importance of experiential learning for students to not only learn about sustainability, but also train their sustainability skills and encourage them to adopt a sustainable way of life. One interviewee emphasised the importance of demystifying sustainability to boost students' confidence in discussing the topic.

When using this approach, teachers connect to students' experiences and their daily lives, providing an opportunity to teach sustainability competences and get them to think about sustainability based on their experiences, connecting to what they are already doing. This can include getting students to survey their local area, identify a sustainability issue, reflect and create projects to tackle it, creating learning moments of sustainability within existing lessons or activities, and reflecting on current student lived experiences. For all approaches, interviewees emphasised that reflection is the key to make it a learning experience.

### *Small step integration*

Interviewees talked of different ways to incorporate sustainability into their courses. One interviewee talked of introducing Icelandic grammatical moods through examining the text found on the food waste bags from the city of Reykjavik. Although the teaching focus is language, sustainability is brought in through the context. This is a common approach in sustainability education where the link between the subject and sustainability is less obvious, e.g., mathematics. In maths for example, graphs and data being used can refer to social or environmental issues. It is a small difference, but it helps increase student awareness of sustainability issues.

### Examples from the School of Education:

Interviewees from the School of Education provided various examples of how they connect to student's lives and use experiential learning when teaching sustainability, such as:

- **Getting students to survey their local area, identify a sustainability issue, reflect and create projects to tackle it:** A few interviewees used assignments to have students reflect on their microenvironment and local area in terms of sustainability. An example of this is an assignment where students were to identify a sustainability issue in their local area and create and implement a project that could help resolve this issue, giving students the opportunity to reflect on sustainability and how they can make an impact on their local environment.
- **Creating learning moments of sustainability within existing lessons or activities:** One interviewee noted that they made an effort to create learning moments of sustainability within the scheduled activities and lessons of their course. An example of this was when students were going on a field trip, they were given the task of shopping for food and putting together a menu for the trip, after which the teacher led the group in discussions where they reflected on the purchases based on sustainability considerations.
- **Reflecting on current student lived experiences:** A few interviewees asked students to reflect on their modes of transport, for example how they travel to and from school, and how they experience their environment differently with different modes of transport. One interviewee made an assignment out of this, where students were to use active modes of transport to travel to and from school for a period of time and write reflections throughout the exercise, getting students to reflect on sustainability, nature and their way of life.

For all exercises, interviewees found it important to start by having a conversation and getting a feeling for students' understanding of sustainability, then letting students tackle sustainability related projects, after which their newfound experience can be connected to academic knowledge and reflected in society.

## Student involvement

Various interviewees highlighted the importance of student involvement in teaching sustainability, as by engaging students and giving them ownership of specific aspects of a course can help them better understand sustainability and integrate it into their learning and lives. They emphasised activating students in the classroom and choosing teaching methods that allow the students to work with the topic themselves, such as flipped classrooms and other student-led approaches, which encourage discussions and peer teaching and learning. At last, interviewees emphasised the importance of student involvement in teaching sustainability, not only in terms of content but particularly for developing the key competencies essential for sustainability.

One interviewee highlighted the benefits of involving students in course design right from the beginning, getting them to work together to create the syllabus and course assessment. By doing this, you can use students' interests to guide how you incorporate sustainability in the course. This can be particularly useful when starting out.

### Example from the Faculty of Social Work:

The Faculty of Social Work offers an elective course on Sustainability, Environmental Protection and Social Work, focusing on green social work, a rapidly growing field internationally. When launching the course, the faculty faced a lack of in-house expertise in the subject. To overcome this, they took an experimental approach by allowing students to design the course. In the first session, students were tasked with developing the course syllabus and assessments as a group. This has turned out to be a great success, with students showing great enthusiasm and ambition in the course design. As a result, students have continued to be involved in the design of this course, and over the years, students have placed a strong focus on the Sustainable Development Goals and invited various experts as guest lecturers.

## Update programmes as a whole

To integrate sustainability into teaching in a holistic manner, one interviewee highlighted the importance of updating the entire programme to place sustainability at its core. This approach ensures that all students graduate with a solid understanding of sustainability. The interviewee provided an example from the Faculty of Food Science and Nutrition, which other interviewees also referenced, expressing interest in adopting a similar approach in their own faculties.

One of the benefits of updating programmes holistically to include sustainability is that it allows different courses within the programme to support and complement each other in addressing the topic. This makes it possible for students to gain a deeper understanding of sustainability and reduces duplication. In fact, it may not be necessary to emphasise sustainability in every course at all times; instead, ensuring it is strategically covered

throughout the programme can be more effective. The timing of introducing sustainability is crucial, though, as presenting it at key points in the curriculum can enhance understanding and relevance, allowing students to build on their knowledge progressively. Various interviewees emphasised the importance of teaching sustainability at the beginning of both programmes and individual courses, rather than doing so at later stages. This allows students to build upon their knowledge of sustainability throughout their learning and ensures that sustainability is given the time and effort it requires.

### **Example from the Faculty of Food Science and Nutrition:**

Following a call for an increased focus on sustainability from students and an analysis by foreign evaluation experts that pointed out that there was a need for greater emphasis on sustainability in the curriculum, the Faculty of Food Science and Nutrition decided to systematically include sustainability in teaching on the bachelor's level. To do so, it was decided to undergo a holistic revision of the undergraduate curriculum in both food science and nutrition. When starting the revision, it was decided that the Sustainable Development Goals were to be the focus point for teaching sustainability, and the point of reference for how the curriculum would be changed. This focus was chosen based on the University of Iceland's strategy for 2021–2026 (UI26). The conclusion of strategic planning for the revision was that the two lines of undergraduate studies, Food Science on one hand, and Nutrition on the other, should be combined in the first two years, with sustainability as a guiding light, and a new curriculum was developed to include sustainability across the board. To do so, all courses were reviewed, and new courses were created to meet the faculty's revised goals. The change to the undergraduate curriculum took effect in the fall of 2022.

Currently, sustainability is mostly taught in two courses. In the first year of study, students take one 10 credit course that teaches basic concepts within sustainability, food science and nutrition, where special attention is paid to the aspects that are common to these interdisciplinary disciplines. The course assessment includes one large group project where students gain insight into the importance of considering what we eat, where our food is produced and under what conditions, and last but not least, what consequences diet and food production have on the environment. In the second year of study, students then take a 6-credit course on food systems and food security where they learn even more about sustainability, such as sustainable food production. Within the faculty teachers try to connect to sustainability in other courses, but not in such a systematic way as in those two courses. After changing the curriculum, the faculty can however be sure that all their students graduate having learned about sustainability.

Further information about this process can be found in [the Journal of the Centre for Teaching and Learning at the University of Iceland](#) (in Icelandic).



## Working with others can encourage innovation and ease the burden

Various interviewees emphasised the importance of interdisciplinarity for teaching sustainability, and some found that working with others, often across disciplines, helped when reimagining teaching and learning to include sustainability. Collaboration within departments and faculties, and across schools or disciplines, can thus be very useful, and even collaboration outside the University, with other universities, NGOs, businesses, etc. This collaboration and interdisciplinarity is also important to broaden students' perspectives and give them a better understanding of sustainability across society. Overall, interviewees found that although it can be challenging to initiate collaboration and cooperation, it usually pays off in the long run.

### Example from Spark Social:

Spark Social is an interdisciplinary course offered to students across all schools and disciplines at all Aurora universities. The course teaches social innovation and social entrepreneurship, where interdisciplinarity is the key. In the course, students learn about sustainability from the different perspectives of various academic fields, and what sustainability means within each field. Students learn about the Sustainable Development Goals and innovation, and are then given the task of weaving them together toward developing their own recommendations for tackling immediate and foreseeable challenges.

The course is taught in collaboration between teachers from different schools and faculties within the University of Iceland, and course organisers also get teachers from other Aurora universities to come in and teach, providing students with different cultural perspectives.

## Challenges and facilitators

When asked: 'What challenges or difficulties have you faced in implementing sustainability in your teaching?' and 'What prevents you from (further) implementing sustainability in your teaching?' the interviewees were in agreement on lack of time as a major factor in preventing them from further implementing sustainability in their teaching. Additionally, one interviewee mentioned the feeling of not being enough of an expert to have the right to discuss sustainability and perhaps related to this, not knowing where and who to go for information.

Several suggestions were given in response to being asked: 'What could UI do to support you?' and 'What do you need to be able to implement sustainability in your teaching?', these included: a guide (e.g., website) with concrete examples/best practice and with links to other resources; the need for building a supportive community and open discussion within and between departments, faculties, schools/disciplines – taking a bottom-up not just top-down approach.



Many mentioned the need for recognition of their work on incorporating sustainability into their courses and programmes, and the extra workload this involved – points within the staff annual progress report and time compensation were suggested.

Many felt that sustainability should be included within the university's HE teaching diploma, so that teachers could be both supported in their work, as well as receive recognition for their efforts.

However, it was also noted that recognition or 'benefits' needed to consider access/relevance of facilitators for adjuncts and freelance/part-time teachers (stundakennarar), e.g., access to the diploma and progress report points.

Interviewees were asked about the possibility of a compulsory sustainability course for all students, as stated in the university's [Sustainability Report \(2022\)](#). Some thought a universal or interdisciplinary course was a good idea and mentioned other universities that had such courses. A collaborative/interdisciplinary projects-based course was also suggested. Others thought it better to address sustainability within departments/faculties.

To get an idea of the agreement on the various suggestions, a vote was held within the workshop. The results of the vote are discussed below under 'Part 3: How can the University of Iceland support teachers in integrating sustainability in their teaching?'

## **Findings from workshop**

### **Part 1: Presentation**

A presentation was given in both Icelandic and English introducing the HighES project and the initial findings from the interviews. The presentation covered: different frameworks used to work with sustainability e.g. SDGs, LOUIS framework, the importance of experiential learning and connecting to students' lives, student involvement in course design, updating programmes as a whole, and how working with others both within the university (e.g. within and across departments, faculties and schools) and outside the university (e.g. through the AURORA or NordPlus network) can encourage innovation, further interdisciplinarity, and broaden students' perspectives, as well as ease the burden on individual teachers. Examples were given of practices and approaches that had been successful at the University of Iceland.

### **Part 2: Group work**

Participants were divided into three small groups. Each group discussed two of the topics below. Below, each topic discussion is summarised, and two topics are expanded on in more detail to give an example of the discussions that took place.

- **Working with the SDGs:** Content, Evaluation, Assignments, etc.
  - Discussion: Participants noted that it is one thing to mark the syllabus with the SDGs that the course teaches, but another thing to meaningfully engage with sustainability in the classroom. They felt focus cannot only be on defining which SDGs are related to the course material.
- **Competences:** How to practically implement?
  - Discussion: Participants felt they didn't really know where to start when it came to the competences. They felt there were so many different frameworks to choose from, each with considerable detail, which is a little over-whelming.
- **Course development:** Student involvement, Assignments, project work, Evaluation, Content
  - Discussion: Participants felt it would be useful to be able to hear what other teachers are doing and what works well, having examples of how to incorporate sustainability in assignments and evaluation.
- **Programme development:** Learning outcomes, Content and sequencing.
  - Discussion: Participants were eager to learn how the Faculty of Food Science and Nutrition had incorporated sustainability into their bachelor's programme. All participants in this group wanted to do so for their programmes but didn't know how to go about it.

### Discussion Example 1:

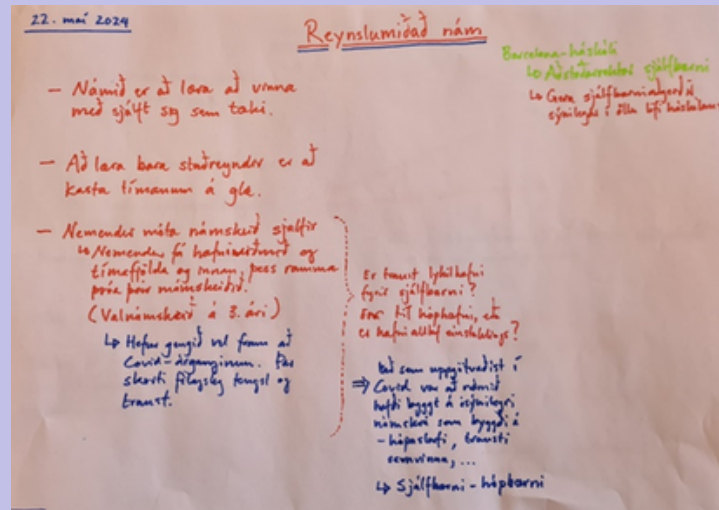
**Experiential and real-life learning:** How can you link to students' current lived experience? How do you make it a learning experience? How can you create a new learning experience?

Participants explored the topic of experiential and real-life learning. They discussed that in doing so, students can learn to "work with oneself as a tool," and emphasised that merely learning facts can be unproductive.

The group discussed how this could be done. A participant gave an example of an elective course for third-year Social Work students, in which students were given the learning outcomes and the allotted course time, then tasked with designing the course and drafting the syllabus themselves. This approach proved highly successful and every year the students designed an ambitious syllabus, fostering a collaborative and engaged environment. However, in post-Covid groups, challenges emerged when attempting to do the same, provoking discussions on whether the noticeable decline in social connections and trust were to blame.

Participants discussed whether trust is a key competency for sustainability, and whether competencies can be attributed to a group as a whole or only to individuals. They reflected on how the Covid pandemic revealed an "invisible curriculum" embedded

The group also discussed the importance of making sustainability actions visible in all aspects of university life, taking an example from Barcelona University which has a vice-rector of sustainability.



**Collaboration:** a) Inside UI: interdisciplinary, how can you connect to other spheres of sustainability? b) Outside UI: Nordic, EU and International networks, projects in the community.

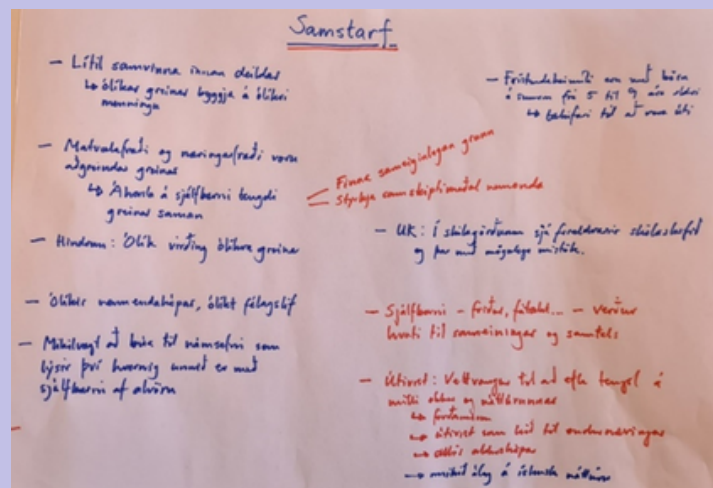
Participants discussed whether and how collaboration can be useful for incorporating sustainability in education. They explored the challenges and opportunities in promoting collaboration and integration within the university, and even just within individual faculties. They noted that different subjects are often built upon distinct cultural foundations, which can be a barrier for collaboration. A case in point was Food Science and Nutrition, which were initially separate subjects but were brought together through a shared emphasis on sustainability. Finding common ground and strengthening communication among students from both subjects proved to be important elements in making the collaboration successful.

However, participants identified several barriers to further collaboration and which make interdisciplinary collaboration difficult:

- Not all subjects receive the same level of respect.
- Students are often not used to working with students from outside of their subject/discipline, e.g. different approaches and styles of working.

Outdoor activities were identified as a promising platform to deepen the connection between us as individuals and nature.

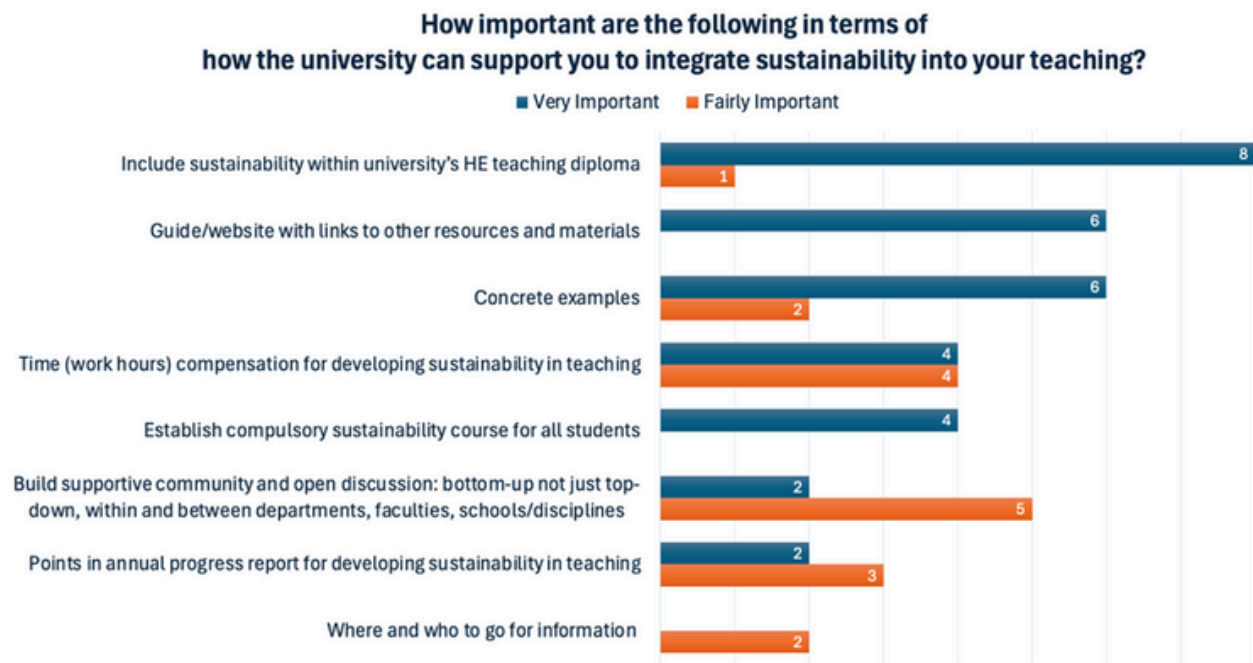
- In addition, the discussion touched upon after-school centres for children aged 5-9, which present unique opportunities for experiential outdoor learning.



When participants were asked to vote on what actions the University of Iceland could take to support teachers in integrating sustainability in their teaching, the following results were obtained.

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Figure 1.

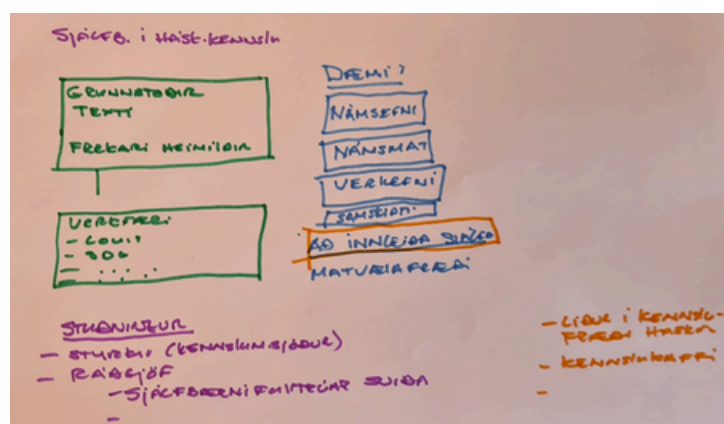


## Part 4: Open discussion

Workshop participants took part in an open discussion reflecting on the workshop and their discussion and thinking forward to the future. They were specifically asked what possible next steps could follow on from the HighES project. What would be most useful for teachers going forward? How can the university support them? Should there be the more workshops through the Sustainability Institute?

Workshop participants felt further workshops would be useful, both more “beginners” workshops but also more advanced ones that go deeper.

Different groups discussed that they find it difficult to find information on how to teach sustainability, they agreed that it would be useful to have a website where you can find everything in one place. It was considered very important to show examples of what has worked for other teachers, how they did things, teaching materials, tools, etc. Some participants came up with an idea of how they would like the website to be organised and what content should be on there, see picture:



## Recommendations and conclusions

The project gave insight into the ways teachers at the University of Iceland currently incorporate sustainability into their teaching through various practices and approaches. Both the interviews and the workshop showed enthusiasm among teachers for incorporating sustainability into their teaching and revealed the variety of good practice already taking place across all five schools. However, the project findings also showed the need for both increased support and recognition for teachers from within their departments and faculty, as well as from the university.

Based on the many discussions that took place over the course of the project, we offer the following recommendations.

### Recommendations for teachers:

- Discuss incorporating sustainability into teaching with colleagues within your department, faculty, and school. Ask for sustainability in teaching to be put on the agenda in department/faculty/school meetings.
- Try to find interested colleagues who may be able to work together with you to develop courses or programmes. Share the workload.
- When reviewing course and programme outlines for the next year, consider how sustainability aspects might be incorporated.
- Starting small: Remember that even small changes can have an effect on students (see Small Step Integration above).
- Consider involving your students in course design. Most students want to learn about sustainability, ask them for their input on how it can connect to their learning.

### Recommendations for the University of Iceland:

- Foster collaboration between the Teaching Centre (Kennslumiðstöð) and the Sustainability Institute in terms of developing a centralised website available to all staff providing sustainability teaching materials, best practice examples, and information on where to find further guidance.
- Include sustainability as compulsory content in the HE Teaching Diploma.
- Consider giving annual progress report points for work on integrating sustainability into courses and programmes. Alternatively, consider time compensation (e.g. reduced teaching hours) for proven courses and programme development focused on sustainability.
- Explore options for a sustainability course for all students. Hold an open discussion with university teachers and review other university initiatives e.g., the University of Akureyri's newly established sustainability course for all students or Reykjavik University's interdisciplinary group project work course.

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**HÁSKÓLI  
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