Sensemaking of sustainability in higher educational institutions through the lens of discourse analysis

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Abstract

Purpose: This study explores (i) the range of sustainability-related discourses by the stakeholders within a particular Finnish Higher Education Institution (HEI), (ii) interaction between the discourses and the organizational context of the HEI and (iii) the extent to which different understandings of sustainability cause challenges for the implementation of the university strategy for sustainability. Specifically, the paper explores how the employees within the HEI make sense of sustainability within the scope of their teaching, research and daily life and the extent to which sustainability-related discourses are aligned or misaligned with the university strategy.

Design/methodology/approach: This research draws upon empirical qualitative and quantitative data collected in an HEI. It is specifically focused on individual discourses by executives, teaching and research staff within the HEI regarding their understandings of sustainability and the Sustainable Development Goals (SDGs).

Findings: This article illustrates the key challenges of sustainability and SDG implementation that may emerge in HEIs due to their various understandings. The results indicate a need for efficient HEI strategic vision communication and consideration of the stakeholders' multiplicity of voices regarding their sustainability values.

Originality/value: The research endeavour takes an in-depth approach, delving into the discourses and understandings of sustainability illustrated by these discourses. The empirical analysis places emphasis on discourses in a Finnish setting and in an academic context. The paper sheds light on the challenges involved in seeking to enhance sustainable development in an academic setting with multiple disciplines and categories of staff guided by academic freedom. The analysis thus advances the understanding of academic sustainability-related discourses and framings as well as mechanisms through which the implementation of sustainability-related efforts can be enhanced in such a context.

Keywords: higher education institution, discourse analysis, sustainable development, strategy, SDG

1. Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO) Declaration for Education 2030 recognizes education as a main driver of sustainable development and the achievement of the Sustainable Development Goals (SDGs) (UNESCO, 2016). The declaration

emphasizes the key role of educational institutions in developing the sustainability-related skills and knowledge of students. According to the declaration, universities, as Higher Educational Institutions (HEIs), should also take a proactive stance in knowledge dissemination and in supporting stakeholder collaboration aimed at the sustainable development of society and the environment. HEIs approach sustainability from different perspectives, including teaching, research, campus operations management, as well as involvement of stakeholders in the development of sustainable solutions (Bessant *et al.,* 2015). Aligning the strategies and curricula of HEIs with the principles of sustainability and SDGs is a global trend, which, however, faces many challenges (Mori Junior *et al.,* 2019; Ramísio *et al.,* 2019; Korhonen-Kurki *et al.,* 2020; Leal Filho, 2020). Due to contextual differences in the understanding of sustainability by various interest groups, universities frequently struggle to implement their vision of sustainability and transform their educational practices into actions. Although sustainability is a known concept, its understanding may differ not only among teachers and researchers from different disciplines but also among other involved interest groups, including students and administrative staff (Reid and Petocz, 2006; Aleixo *et al.,* 2018; Bien and Sassen, 2020).

Differences in sustainability sensemaking may be rooted in the term's conceptualization according to the separate scientific fields and different priorities of sustainability spheres for research or teaching (Dziubaniuk *et al.,* 2022b). For instance, sustainability may not even be recognized as "science" but as ideology andface emotional resistance among university staff (Korhonen-Kurki *et al.,* 2020). Additionally, despite the popularization of the SDGs within HEIs, awareness about the SDGs may still not be sufficient across university disciplines (Fleacă *et al.* 2018; Janoušková *et al.*, 2019; Leal Filho, 2020) due to their too general description or internal stakeholders perceiving them as forced upon the HEIs by political agendas (Bruns et al., 2019; Janoušková *et al.,* 2019; Dziubaniuk *et al.,* 2022b). Djordjevic and Cotton (2011) indicated that sustainability is a rather difficult concept to grasp due to its multiple potential understandings, which, due to selfishness and an inability to associate their own behaviour with sustainability issues, may result in individuals' resistance to behave in a sustainable way. Thus, universities' attempts to promote sustainability and SDGs may remain superficial in cases in which a common understanding of these concepts is not efficiently framed and communicated.

The variety of voices in academia regarding the meaning of sustainability creates a gap between the individual commitment of stakeholders and the shared vision of sustainability challenges addressed in the university's strategy and curriculum. This may result in misunderstandings of sustainability embeddedness in the curriculum (Cebrián *et al.,* 2013) and misalignment of the strategic orientation towards sustainability between an HEI as an organization and its internal stakeholders (Franco *et al.,* 2019). Current research primarily focuses on leaders within HEIs and their discourses on sustainability practices in the organizational contexts facing sustainability transition (Bien and Klußmann, 2021; Bien and Sassen, 2022), whereas the individual level of meaning creation among the broader group of internal stakeholders may more accurately reflect the sustainability sensemaking predominant in an HEI. Sensemaking focuses on how 'people

appropriate and enact their realities' (Brown *et al.,* 2015, p.267). It has a cognitive and communicative character (Ivanova-Gongne, 2015) in that discourses affect how individuals interpret and produce meaning of the situations they encounter (Brown *et al.,* 2015; Whittle *et al.,* 2023) and consequently put their sensemaking into words. Accounting for the role of wider, macro-level discourses in micro-level sensemaking has been called upon in previous literature (Brown *et al.,* 2015; Ivanova-Gongne *et al.,* 2022b).

This study explores a variety of discourses among internal university stakeholders, their linkage to the overall HEI context and conflicting discourses that may arise regarding sustainability. Thus, this study aims to answer the following research question: *How does the interplay between the overall context of an HEI and individual sensemaking create multiple discourses that impact sustainability efforts within the HEI?* Empirically, this research is focused on individual sensemaking of sustainability and the SDGs expressed through the discourses by students, teaching/research and administrative staff within a Finnish university. This study adopts a mixed methods approach, including qualitative (i.e. interview analysis) and quantitative (survey) methods of data collection. The context of Finland provides a specific research interest since Finnish HEIs are known for integrating principles of sustainability into their research and teaching processes, which is actively supported by the Ministry of Education and Culture (Friman *et al.,* 2018). Additionally, Finnish HEIs are committed to a national initiative focused on upscaling the integration of sustainability in university education, research, administration, processes and campus solutions (Unifi, 2020).

The research findings contribute to the literature on sensemaking about sustainability and its implementation in HEIs and primarily add to the field of education for sustainable development (Leal Filho *et al*., 2019; Franco *et al*., 2019). The study also answers a call by Bien and Sassen (2022) regarding the inclusion of various internal stakeholders in research on sustainability sensemaking in the context of an HEI. The empirical part of this study extends the knowledge of discourse analysis as a method for analysing individual sensemaking on sustainability (Cukier *et al.,* 2009). The country context adds to the knowledge on the sustainability and implementation of SDG practices in HEIs at the national level. However, the results may be of broader potential interest to the international educational community and policymakers.

This paper continues with a literature review focused on the role of sustainability in higher education and the conceptualization of individual sensemaking. The review is followed by a section on methodological choices and a results section focused on the analysis of the empirical data. The subsequent discussion section is devoted to the key findings and the interrelation between these and previous research findings. The final concluding section summarizes the main findings, contributions and research limitations and proposes future research avenues.

2. Literature review

2.1. Sustainability in the context of HEIs

Currently, sustainability remains the key driving concept for social change among HEIs and scientific disciplines. The conventional perception of sustainability, grounded on three pillars – environmental, social and economic – that promotes a balance between human activities and nature (Purvis *et al.,* 2019), obtains new meanings and trajectories guiding social change. For instance, a study by Adloff and Neckel (2019) identifies three trajectories reflecting imaginary sustainable futures in the realms of politics, economy, society and science. The first trajectory promotes a "green economy" relying on progress in sustainable technologies, the second emphasizes the fundamental transformation of society to achieve a sustainable economy and an adaptation to economic degrowth, and the final trajectory promotes resilience supported by sociotechnical advances, political and institutional control, and anticipation of environmental and social risks. These interrelated trajectories reflect discourses on development alignment between society, the natural environment and economic viability, and how human beings visualize and act towards a sustainable future by developing technologies and knowledge, redefining social structures or promoting collaboration among interest groups for the implementation of sustainable solutions. Similarly, Ruiz-Mallén and Heras (2020) explored global HEI networks and distinguished three predominant sustainability discourses: 1) a discourse of resilience that aims to increase control and responses to environmental and societal challenges through innovation; 2) a discourse of "greening" that promotes green economics and collective contribution to SDGs and 3) an alternative discourse that embraces universities as agents of societal transformation to redefine economic growth models to balance societal development with environmental concerns.

The discussion about sustainability perspectives indicates a general alignment of HEI goals to address Agenda 2030. The role of HEIs is to contribute to solving global challenges and offer training for future professionals who, in turn, will facilitate changes towards sustainability (Mulà and Tilbury 2009). Research and educational activities within HEIs can be pursued as catalysts for the development of sustainable innovations and for promoting sustainability values in society (Velazquez *et al.,* 2006). However, changes towards sustainability in HEIs are not without challenges. Among the most common barriers to the implementation of sustainability across universities are lack of financial support (Aleixo *et al.,* 2018; Leal Filho *et al.,* 2020), lack of a common understanding of the conceptualization of sustainability (Albareda-Tiana *et al.,* 2018; Bien and Sassen, 2020), insufficient institutional frameworks to facilitate the implementation of the principles of sustainability across a university (Lozano *et al*., 2015), and lack of concrete rewards for referring to sustainability in teaching and research activities (Ávila *et al.,* 2017).

Embedding sustainability in university programmes requires leadership by executives and their dedication to SDGs, which should be reflected in the governance of the organization (Bien and Sassen, 2020; Lozano *et al.,* 2015). Communication with internal and external stakeholders remains the key element in promoting sustainability in universities (Purcell *et al.,* 2019), as well as in companies (Lång and Ivanova-Gongne, 2019)). Stakeholders within an HEI can include (i) leaders

steering the change towards sustainability; (ii) teaching and research staff within the faculties; (iii) administrative staff focused on the implementation of the university strategy and internal relationships and (iv) students as the main receivers of knowledge about sustainability (Aleixo *et al.,* 2018). External stakeholders may include companies, local or international governmental institutions and social activists (Bessant *et al.,* 2015). The university strategy document and sustainability reports can also be tools that manifest an HEI's contribution to SDG implementation (Yanez *et al.,* 2019). The normative strategy may also reflect the top-down approach to the intended identity of an HEI regarding sustainability values and issues (Ramísio *et al.,* 2019). The identity of an organization is grounded in the link between the internal context and the executives' perception of the desired image (Gioia and Thomas, 1996). Organizational identity is socially constructed, based on multiple voices, and often represents an executive's interpretation of the pursued image, internal culture and characteristics of internal community (Gioia *et al.,* 2000; Degn, 2018). The individual identity of an organization's internal stakeholders is drawn on sensemaking of their professional and individual values, attitudes, knowledge and practices (Becher and Trowler, 2001). The stakeholders' understanding of an HEI's identity can be expressed by linguistic constructs, institutional practices and stakeholder expectations (Degn, 2015). Thus, the sustainability identity of an HEI can be developed through executives' values pursued in the institutional framing, including, for instance, SDGs as well as teaching and research practices addressing sustainability (Bien and Sassen, 2020; Degn, 2018).

2.2. Understanding sustainability by HEI stakeholders

Several studies have indicated that the vision of sustainability held by an HEI's executive can differ from the understanding of administrative, teaching staff and students. This can cause conflicts when integrating sustainability into educational programmes and research (Amaral *et al*., 2020; Djordjevic and Cotton, 2011; Cebrián *et al.,* 2013). Different conceptualizations of sustainability and vague perceptions of SDGs among internal HEI stakeholders may cause misalignment between teaching and research practices and the sustainability-related goals outlined in the university strategy (Albareda-Tiana *et al.,* 2018; Aleixo *et al.,* 2018; Reid and Petocz 2006). In some cases, sustainability may be embraced as a concept that researchers are forced to mention in the grant application (Dziubaniuk *et al.,* 2022b) or as a politically imposed ideology rather than a scientific discourse (Korhonen-Kurki *et al.,* 2020). The absence of a joint understanding may lead to poor integration of sustainability-related topics within disciplines and miscommunication of sustainability knowledge if these practices are not supported by an HEI's administration (Amaral *et al.,* 2020).

It is important to consider the understanding of sustainability by internal stakeholders from the point of view of curriculum and strategy development, as the manner in which stakeholders make sense of sustainability can be reflected in their acceptance of change, as well as their teaching and research activities. For instance, the findings of Reid and Petocz (2006) showed that, from the

personal perspective of the teaching staff, sustainability can be understood as social justice, sustainability of natural resources and cultural identity and longevity of development processes. Aleixo *et al.* (2018) stress that even though university teachers and researchers aware of the most common definition of sustainability they may not be fully aware of how sustainability is integrated into their HEI programmes. Another study focused on university leaders responsible for sustainability implementation across an HEI and highlighted their focus on curriculum changes to include more sustainability-related subjects and the sustainability of campus operations (Leal Filho, 2020). The study also indicates the major challenges, such as a lack of funding and support from administrative staff in addition to the lack of a joint understanding of sustainability issues, the absence of a clear mission or vision of the university development towards sustainability and resistance of the HEI's personnel to change. Students' attitudes towards sustainability concepts also tend to vary according to their personal interest in the issues, but a majority prioritizes environmental concerns as a main aim of sustainable development (Dziubaniuk and Nyholm, 2020). This shows a need for interconnectedness of different sustainability aspects in the curriculum by linking environmental, economic, social, cultural and intergenerational aspects to illustrate the complexity of sustainability. Additionally, according to previous research from different countries, students' general awareness of the SDGs remains surprisingly low despite efforts from university teaching, media and social networking to spread this knowledge (Weybrecht, 2021).

One can assume that a variety of sustainability and SDG perceptions and understandings in an HEI may be beneficial for the personalization of sustainability issues to individuals and locations. However, differences in discourses on sustainability may create challenges for internal stakeholders in holistically approaching sustainability in HEIs (Djordjevic and Cotton, 2011; Korhonen-Kurki *et al.,* 2020). Therefore, it is important to consider the way individuals make sense of sustainability in relation to organizational strategies for sustainability within HEIs.

2.3. Individual sensemaking and wider/macro-level discourses

The article at hand adopts a constructivist approach to sustainability (see, e.g. de Graaf, 2007), focused on how the concept of sustainable development is constructed socially in a particular context. Thus, the point of departure is that no objective truth exists when it comes to defining sustainability. Rather, the understanding of sustainability is seen as a product of deliberation and discourse in a particular setting. Discourses, therefore, are powerful tools through which understandings of sustainability are upheld and changed (Groop, 2021). Individuals are active participants in the construction of sustainability meaning through the process of sensemaking (Ivanova-Gongne *et al.,* 2022a). Colville and Pye (2010) metaphorically described sensemaking as the 'way people make bets on what's going on and what to do next'. As per the classic definition of Weick (1995), sensemaking has seven properties, including retrospection, social, ongoing, enactive of the environment, plausibility, extracting cues and identity construction. Thus,

sensemaking is an ongoing process that is grounded in identity and contingent on individuals' interactions with others (social), is about extracting cues that make plausible sense (plausibility) and is affected by previous experiences (retrospection) and the context in which the individual is embedded (enactive of the environment) (Weick *et al.,* 2005; Helms Mills *et al.,* 2010).

The term discourse refers to 'any instance of signification, or meaning making, whether through oral or written language or nonverbal means' (Weninger, 2012, p.2). Discourses both affect and are affected by individual sensemaking. Thus, individual sensemaking is shaped by wider discourses: institutional, political and cultural (Ivanova-Gongne *et al.,* 2022b). From this perspective, discourse 'refers to the collection of linguistic and social practices that comprise a system of thought which shapes how people make sense of themselves and the world around them' (Whittle *et al.,* 2023, p. 1826). At the same time, the communication of individual sensemaking and social interaction between individuals may give birth to new or changed discourses. Discourse-focused studies can be conducted by means of, for instance, critical discourse analysis (CDA), which delves into discourses within a particular context that interacts with those discourses. Such analyses approach discourses as a means to dominate, exclude or challenge existing norms (Fairclough, 2003; Groop, 2021). As such, discourses can be approached as a means of power to 'impos[e ones] definitions of reality' (Berger and Luckmann, 1967, p.1034).

3. Methodology

3.1. Empirical context

This study empirically analyses a particular Finnish HEI. The context of Finland is of interest due to Finland's aim to build an economically, ecologically and socially sustainable society based on competence and inclusion. With a point of departure in the UN Agenda 2030, the Finnish Sustainable Development Committee, chaired by the prime minister, has developed a roadmap for implementation of the SDGs connected to the national sustainable development work in the Society's Commitment (Government Sustainability Roadmap, 2023).

Agenda 2030 is incorporated at all levels of Finnish education policy. According to the Universities Act of 2009, Finnish institutions of higher education remain autonomous entities under the Ministry of Education and Culture. As such, they are responsible for their own administration, research and teaching. Most of them have systematically integrated sustainable development into education, research and administration. The aim of these efforts is to create solutions to sustainability challenges and to provide students with the competences required in the labour market (Voluntary National Review, 2020). Additionally, Finnish universities have united their efforts towards sustainability in education and created a Universities Finland (UNIFI) network, the role of which is to promote cooperation between universities and develop a shared framework for sustainability approaches in teaching, research and daily life. UNIFI emphasizes the role of universities in

'combating and solving climate change and other crises, creating the necessary expertise and nurturing a safe and stable society' (Unifi.fi).

The university of interest to this paper, though rather small, covers a variety of disciplines. The topic of sustainability is integrated into the university strategy, which was adopted in 2020. The strategic vision for the years 2021–2030 emphasizes international research and education to support a healthy and sustainable living environment, as well as an inclusive and open society. The strategy promotes research that addresses global challenges and the achievement of SDGs through social and environmental spheres. The university is also an active member of the UNIFI organisation.

3.2. Data collection

Considering the complexity of the research objective of this study, , both qualitative and quantitative data were gathered. Empirical data were collected from multiple sources through interviews and surveys. Qualitative data were useful for investigating understandings or sensemaking of sustainability among internal university stakeholders (see Weick *et al.* 2005). The researchers were interested in collecting textual evidence on how the respondents make sense of the sustainability-related concepts and the SDGs in the scope of the university context and their individual discourses on sustainability. The specific themes in focus, apart from the overall sensemaking of the sustainability concept, were the following: i) personal reflections on and engagement in promoting sustainability, ii) role of sustainability in each respondent's teaching and research and iii) discourses on HEI's strategy and embeddedness of sustainability in HEI's activities. These themes also allowed us to structure the data in terms of its analysis (see Section 3.3). Thirteen semi-structured interviews were conducted in October–December 2020. Given the four strategic research profiles (SRP) of the university, the first interviews were undertaken with two representatives of each SRP. These representatives are responsible for the research collaboration and are aware of the thematic direction of the research profiles. Thereafter, an interview was conducted with a staff member in a leadership position responsible for collaboration and communication regarding sustainability within the HEI. Finally, four faculty leading executives provided their attitudes and concerns regarding sustainability and the SDGs. Their participation was crucial for the research endeavour due to their leading positions within the HEI and their involvement in teaching and research activities at the HEI. Table 1 summarizes the research participants and their roles in the HEI.

Table 1. Empirical qualitative data outline

Academic position	Role in the HEI	Number of respondents

| Teacher and researcher	Representative of SRP on chemical engineering and material technology	2
Teacher and researcher	Representative of SRP on medical diagnostics, IT in health and drug development	2
Teacher and researcher	Representative of SRP on minority positions, identities and rights research	2
Teacher and researcher	Representative of SRP on marine and maritime research	2
Staff members in leadership positions	Responsible for sustainability collaboration and communication	1
	Faculty executive	4

Since the interviews were conducted during the COVID-19 pandemic, the interview sessions were conducted remotely via Zoom and recorded with permission from the respondents. The interviews lasted from 45 minutes to 1 hour. The interviewees were informed about the purpose of the research and how the data would be analysed. The key themes of interviews included 1) the understanding of the concept of sustainability, 2) the understanding of the SDGs, 3) discourses about the university practices regarding sustainability, 4) the relevance of sustainability and the SDGs to the respondents' research and teaching and 5) individual attitudes and understandings of sustainability beyond the scope of the HEI. Due to the sensitive nature of the topics raised during the interviews, the interviewees were granted anonymity. To use direct quotations from the interviews in this paper, interviewees were assigned numbers from 1–13, which serve as references.

The quantitative data were collected from students, teachers/researchers and administrative staff in March–April 2020. The questionnaire was built in Qualtrics XM. Administering it via email allowed participation from familiar surroundings, ultimately eliminating researcher- and laboratory-related biases (Catania *et al.,* 1996; Davis *et al.,* 2010). As the purpose of the quantitative data collection was to explore the descriptive information, some of the questions were generated by the researchers; the rest were adopted from previous literature, modifying the wording to make it suitable to the context of this study: action (Leal Filho *et al*., 2019), injunctive norms (Ajzen, 2002), descriptive norms (Ajzen, 2002), societal injunctive norms (Park and Smith, 2007) and societal descriptive norms (Park and Smith, 2007). The participants were asked to either choose their responses from different options (for the question 'Sustainability is about…') or indicate their preferences on a 7-point Likert scale (for the statement 'Most people who are important to me think

that I should follow sustainability principles in my life'). The questionnaire also inquired about the participants' perceptions of the importance of SDGs. They were required to express their responses on a 7-point Likert scale, with 1 indicating "not at all important" and 7 signifying "extremely important".

3.3. Data Analysis

Quantitative method. The data were analysed using IBM SPSS Statistics 27. Before the primary analysis, Cronbach's alpha was computed for each variable (Ajzen, 2002; Park and Smith, 2007). Given the exploratory nature of this analysis, descriptive statistics were calculated in the form of frequencies, means (M), minimums/maximums and standard deviations (SDs) to extract the descriptive information (see Table 2).
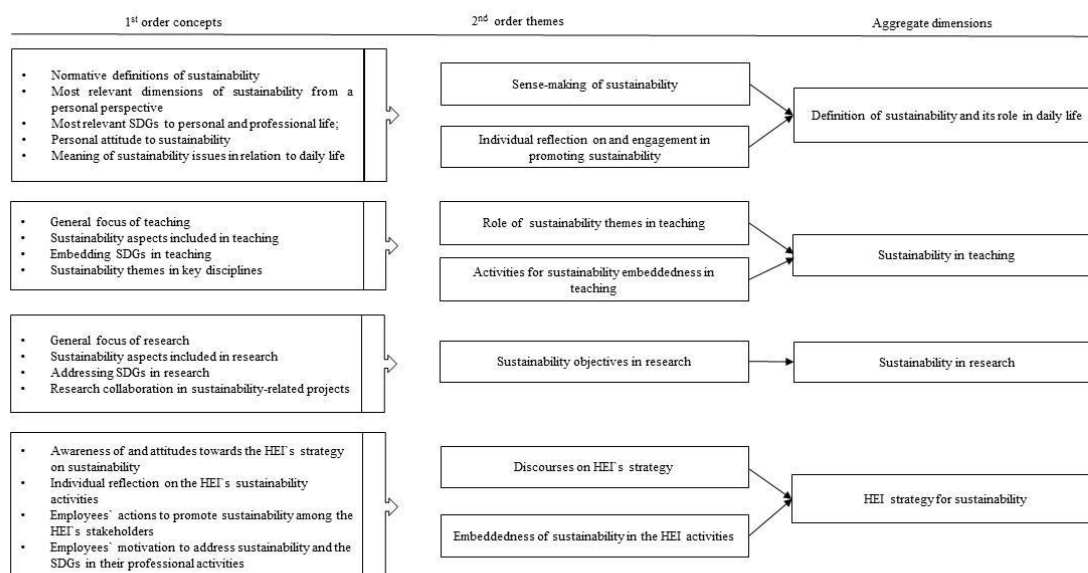
Figure 1. Structure of data codes

Qualitative method. The analysis of the obtained data followed the steps for CDA outlined by Cukier et al. (2009). As a first step, the entirety of the data to be analysed was defined. The second step relates to the actual analysis of the content of the data and coding (Cukier *et al.,* 2009). Whereas the survey data focused on descriptive information, the interview questions delved into perceptions and understandings of sustainability. Data coding was performed using NVivo qualitative data management software. The codes are summarized in Figure 1. The first-order codes were assigned to the concepts and expressions about understanding sustainability, application of its principles in professional life and daily routine, and acknowledgement of the HEI strategy and approaches to sustainability promotion across the organization. The assigned codes were grouped according to themes that reflected the explored discourses. The final step included re-reading the

coded claims, interpreting them and explaining the findings to the reader (Cukier *et al*., 2009). In particular, we reflected on the interrelation between the separate coded themes and how the sustainability understandings of our interviewees were linked to the wider societal context. The societal context in this study was the HEI system in Finland, as well as the broader understanding of sustainability as outlined by the United Nations (UN) (see Sections 2.1 and 3.1). The understanding of the context was thus based on secondary data, such as reports and scientific articles, as well as previous experiences and works by the authors of this paper.

4. Results

4.1. Individual priorities of SDGs

The survey received a total of 687 responses. Of the respondents, 57% were female and 16 chose not to disclose their gender. The average age of the participants was 37, ranging from 19–74 years, with the most frequent age being 20–21. The SD for age in this study was 13.72. Table 2 provides descriptive statistics for both the measured constructs and the items.

Table 2. Items measuring key constructs

Variables and items	α if the item deleted	M	SD
Injunctive norms (Ajzen, 2002) **Cronbach's α = 0.834**		4.743	1.281
Most people who are important to me think that I should follow sustainability principles in my life.	0.736	4.69	1.444
It is expected of me that I follow sustainability principles in my life.	0.794	4.51	1.495
The people in my life whose opinions I value would approve of my following sustainability principles in my life.	0.78	5.04	1.503
Descriptive norms (Ajzen, 2002) **Cronbach's α = 0.836**		4.6839	1.137

Most people who are important to me follow sustainability principles in their lives.	0.724	4.43	1.323
The people in my life whose opinions I value follow sustainability principles in their lives.	0.752	4.8	1.306
Many people like me, follow sustainability principles in their lives.	0.837	4.81	1.301
Societal injunctive norms (Park and Smith, 2007) **Cronbach's α = 0.896**		4.571	1.207
A majority of people in my country approve of following sustainability principles in their lives.	0.855	4.67	1.337
A majority of people in my country endorse following sustainability principles in their lives.	0.818	4.66	1.352
A majority of people in my country support that individuals follow sustainability principles in their lives.	0.88	4.57	1.29
Societal descriptive norms (Park and Smith, 2007) **Cronbach's α = 0.869**		4.06	1.146
A majority of people in my country follow sustainability principles in their lives.	0.821	4.11	1.337
A majority of people in my country have expressed their wish to follow the sustainability principles in their lives.	0.8	4.19	1.2287
A majority of people in my country engage in sustainability principles in their lives.	0.825	3.88	1.237

Utilizing Likert-scale responses, a ranking of SDGs was established, highlighting their perceived importance to the participants. In the context of defining sustainability, three SDGs emerged as particularly crucial: responsible consumption and production, affordable and clean energy and climate action. Additionally, importance was placed on responsible consumption and production, climate action and clean water and sanitation. Teaching and research mostly focused on quality education, gender equality, good health and well-being, and reduced inequality. In daily life, the

three most addressed SDGs were gender equality, good health and well-being, and responsible consumption and production.

4.2. Definition of sustainability and its role in daily life

. Most of the interviewees had a certain understanding of the meaning of sustainability. The level of understanding, however, was divergent and depended on the scope of involvement in, for instance, projects related to sustainability or personal interests. Almost half of the interviewees (5 of 13) conformed to the classic definition of sustainable development by the Brundtland Commission Report (Schaefer and Crane, 2005), referring to the needs of future generations. Additionally, several interviewees also mentioned the 2030 Agenda and the triple bottom line.

> *Sustainable development is how our work can contribute not only to the better future but also to the future that sustains itself. What can we do to help make progress in a way that it can progress on its own as well with less and less of our own intervention?* (Interviewee 4)

Some of the interviewees defined sustainability in relation to their specific fields rather than in general terms. However, a few had to clarify with the interviewer what they mean specifically and overall did not feel that sustainability is at the core of their life in general and research in particular.

> *It is hasty to answer the questions that do not belong to my expertise, but if we talk about sustainable development in a narrow scope of chemistry, it's easy for me, like sustainable materials.* (Interviewee 1)

> *I am really into medicine, nanomedicine, and this field. Sustainable is kind of not my subject..* (Interviewee 2)

To make sense of the sustainability/sustainable development definition, the interviewees resorted to sensemaking elements such as "enactive of the environment" and "social", where certain rules, routines and language of an organization or wider society affect the individual's sensemaking (Helms Mills *et al.*, 2010). Overall, the interviewees focused on field-specific aspects of sustainability when discussing their research and teaching, which corresponded with the research or educational field into which they were embedded.

The interviewees also reflected on the various ways in which sustainability is present in their daily lives. Their ways of dealing with the issue in daily life were very much linked to their professional identities. For instance, the interviewee who specialized in pedagogics emphasized the importance of teaching sustainability to their children, whereas the interviewee whose professional focus was on the field of physics emphasized the importance of energy aspects of sustainability.

For a few years now, I have, completely unnecessarily, postponed the acquisition of a heat pump, which I believe would be one of the biggest useful things that I personally can do for the environment. An electric car would be interesting.... So again, this is a bit focused on these energy aspects that are closest to me thanks to my teaching and my interest in energy theory in thermodynamics. (Interviewee 1)

Another example is a researcher with a focus on organic chemistry with their view on sustainability in daily life being linked to waste sorting. Such a view can, however, also be linked to general societal discourses on how sustainability plays a role in our daily lives. For instance, topics such as travelling, food waste, garment reuse and sustainable heating were mentioned by the interviewees.

4.3. Sustainability in research

The research of the HEI at hand indicates a focus on sustainability from the perspective of various research disciplines. The interviewees work on a wide range of projects and one can find links both to a specific profile or to several of them. Some of the sustainability-related research has also developed over a longer period and has only recently started to be discussed with sustainability terminology.

Four interviewees defined their research as explicitly dealing with sustainability. These cases concerned governance of sustainability, business models for sustainable transport and energy as well as green technology. In addition, most of the other interviewees also recognizedconsiderable links between their research and the strive for sustainability. Examples range from studies on how values change in society and the processes around otherness to improved living conditions through better inclusion of minorities in society or improved health from developments within medicine.

Both environmental and social sustainability were discussed by the interviewed researchers, and in most cases, one or the other was emphasized, depending on whether the interviewee's research was done within a field of science or a field closer to humanities. Based on the analysis, economic sustainability was not the focus of these interviewees' research. All interviewees, however, pointed out the obvious need for funding for research to improve sustainability. However, the links between, for instance, better living conditions, inclusion and improved income levels were discussed on a general level.

Additionally, the interviewees noted that it was important to include questions about how the research is being conducted. This includes research ethics and environmental effects such as risks for contamination and use of more environmentally friendly materials in testing procedures. The interviewees also discussed a general feeling that the SDGs are "artificial" and needed mostly for the funding applications (Interviewee 10). In most cases, however, this was not seen as a problem. Only one interviewee commented that it might be done just to fulfil the application criteria set by

the governmental research funding institution (Interviewee 2) without the intention of including sustainability in the actual research.

4.4. Sustainability in teaching

All the interviewees confirmed that their research directions were closely interconnected with their teaching themes. According to the representatives of natural sciences such as medicine or chemistry, their teaching is closely interrelated with work in the laboratories and teaching students the practicalities of research conduct. Sustainability is sporadically covered in related courses but not emphasized as an individual subject. In their case, sustainability is taught in connection to the research projects, except that it may be framed differently compared to humanitarian subjects, as, for instance, an interviewee explained:

> *We teach that to improve the quality of the environment we need to measure and define the problems. […] If we would not be able to measure carbon dioxide in the air, how could we know that this is causing the problem with climate change for example?* (Interviewee 7)

Additionally, representatives of natural sciences must rely on ethical guides or lectures about safety that, however, may include 'teaching good practice to students who come to our lab […]. One of the main aspects that we must deal with is the way we do our work and how we can minimize an impact on the environment' (Interviewee 13). Interviewees implied that sustainability is not approached from the generalized perspective of balancing environmental, social and economic concerns but rather as a practical approach to treating colleagues in a fair way, being responsible in dealing with laboratory materials to respond to environmental regulations or developing educational programmes to sustain quality education.

Representatives of the humanities referred more to the formal terms, as in the UN definition.. They were also more aware of the SDGs, something that also applies to university employees holding managerial positions. The teachers within the humanities were more concerned about social sustainability that is interconnected with environmental issues – since 'Man is a part of nature' (Interviewee 2) – and economic sustainability that impacts the two other dimensions. The most frequently taught themes related to sustainability included social justice, migration, law, sustainable business models and politics. It is noteworthy that teaching about climate change was mentioned by Interviewees 10 and 11, whose perspective is social science that covers themes of climate change–caused refugees and its impact on legislation and states.

Most of the interviewees agreed that more basic knowledge of various sustainability challenges still needs to be communicated to the students in the courses. Developing an appropriate curriculum should involve incentives for education and leadership. Additionally, pedagogical practises that address sustainability could be included in the annual teachers' evaluations. However, this evaluation may be challenging due to an ever-changing variety of sustainability issues, as one interviewee explained:

You are never going to be able to fully measure whether someone is competent. And I don't think any one of us is ever going to be fully competent, because [...] the whole idea of sustainability is that you continue building your competencies throughout life. (Interviewee 5)

4.5. University strategy

The strategy and its (sustainability-related) goals were surprisingly poorly known among the interviewees. A number of interviewees (12 and 13) had not come across the document, highlighting that they primarily associated themselves with their own strategic research area rather than with the HEI as a whole. Certain interviewees failed to see the role of the university strategy in everyday work:

I am not sure what kind of a role this strategy plays in reality. Those strategies are often full of nice words, and they [...] seldom have [...] real impact on what happens in reality. (Interviewee 8)

Opinions were divided regarding the actual implementation of the university's sustainability-related targets. Interviewee 8 regarded the overall implementation as rather good, and others provided positive examples, including studies on minorities in relation to sustainability (Interviewee 10) and the HEI's overall 'intellectual position in society' (Interviewee 9). More critical voices, however, pointed to the absence of a coordinated and strategic approach regarding sustainability (Interviewee 5), risks of 'sustainability-washing' (Interviewee 10) and challenges related to university infrastructure and its energy efficiency (Interviewee 9). The absence of monitoring was also brought to the fore, highlighting that it is difficult to say whether progress is being made (Interviewee 7).

It was clear that the university's activities in the field of sustainability were lost on some interviewees due to poor visibility and sustainability-related communication (Interviewees 4, 5 and 10) and interviewees underscored the importance of improved dialogue and collaboration:

We need to work with the feeling of co-involvement on the part of the staff, that they feel that they can really come up with initiatives that go further, that it will not be a top-down, non-democratic way. (Interviewee 3)

To increase awareness of and ability to promote sustainability, several interviewees (3, 6, 7 and 12) called for courses and workshops. Whereas some wished for events of a more general nature, others called for subject-specific sessions: 'It should not be something general. If it is something general, people can just watch YouTube videos online' (Interviewee 12).

Many interviewees touched on the topic of motivation to engage in sustainability-related activities. Reflections related to leadership engagement (Interviewees 4 and 5), peer inspiration (Interviewees 6 and 9) and the need for incentives (Interviewees 5, 11 and 13) in the form of rewards or funding.

However, lack of motivation to engage in sustainability-related activities was also linked to shortage of time.

5. Discussion

5.1. Challenges of aligning sustainability discourses and an HEI strategy

The discourses analysed within the scope of this study show that the HEI grapples with aligning its activities with the principles of sustainability, something that is also evident from similar research (see, e.g. Mori Junior *et al.,* 2019). However, the study at hand differs from previous studies, according to which, discourses on sustainability within HEIs have focused on resilience to global challenges, contribution to SDGs and HEI's position as societal agency for transformation (Ruiz-Mallén and Hera, 2020). Instead, the study at hand illustrates how sustainability discourses are formally communicated through SRPs and university strategy. This indicates a top-down approach to sustainability implementation in organizational activities and image construction, which may cause tension between internal stakeholders if the strategic aims are not clearly communicated (Bien and Sassen, 2020; Ramísio *et al.,* 2019).

Previous research emphasises the need to align the top-down and bottom-up approaches of an HEI's sustainability identity construction to embrace a multiplicity of voices in decision-making. In this manner, sustainability is not pursued as a forced ideology embedded in the curriculum (Bien and Sassen, 2020; Degn, 2018; Korhonen-Kurki *et al*., 2020). The results of the study at hand indicate some success in embedding sustainability in teaching and research but also remaining challenges. From a strategic angle, discourses point towards not just weaknesses in terms of sustainability-related alignment but challenges ensuring that different faculties, disciplines, categories of staff, activities and individuals are aware of the overall strategic approach of the HEI and work towards the same broad academic goals. Furthermore, the analysis points to pockets of (i) weak university identity, which affect staff members' allegiance to strategic targets as well as (ii) low awareness regarding sustainability-related activities within the HEI. Previous research has addressed these issues through increased communication and collaboration among internal stakeholders with the help of external experts and activists (Bessant *et al.,* 2015; Purcell *et al.,* 2019; Lång and Ivanova-Gongne, 2019). Other research also emphasizes the importance of sustainability-related staff training and engagement, as well as management support and leadership (Bien and Sassen, 2020; Lozano *et al.,* 2015). Sustainability reports prove their usefulness for university sustainability performance assessment in addition to improving stakeholders' motivation to participate in decision-making processes and shaping a strategic vision for the HEI's future development (Yanez *et al.,* 2019).

Areas of high awareness of and familiarity with the HEI strategy could also be identified in the data. The results of the study show that sustainability-related principles could be found in the strategy as a document, although sometimes presented in a rather "hidden" fashion, lacking detail, clear definitions or action plans. However, awareness of the normative sustainability perception in

an HEI may be important not only to inform internal stakeholders about an organization's strategy towards sustainability but also to create awareness of the formal directives at the national level such as the Government Sustainability Roadmap (2023) or international ones, such as the UN Agenda 2030. Lack of this knowledge may hinder international collaboration with other universities, as well as other external stakeholders, and create issues in applications for funding. An institutional framework that is linked to the principles of sustainability implementation can be an answer in this case (Lozano *et al.,* 2015), as long as it does not limit employees' creativity and the variety of approaches in incorporating sustainability in HEI activities. Freedom of research and teaching should be guaranteed, as many university employees have expressed their passion for sustainability and connected it to their professional and daily lives. However, the general framework should lead those who are the least interested in sustainability teaching and research towards common strategic goals.

5.2. Making sense of sustainability and SDGs

Previous research, to some extent, covers how the lack of a comprehensive institutional framework leads to the challenge of different understandings of sustainability among interest groups (Reid and Petocz, 2006; Aleixo *et al.,* 2018; Bien and Sassen, 2020). Employees in leading positions may understand sustainability principles differently from the rest of the internal stakeholders, which may cause misalignment of strategic goals within an HEI (Amaral *et al.,* 2020). This is also visible from the study at hand, where executives demonstrated more conventional approaches to sustainability, grounded in Agenda 2030 or the Brundtland report (Schaefer and Crane, 2005). However, the discourse analysis of this study shows that research and teaching personnel understand the concept of sustainability through the lens of their professional focus. Such understandings can be assumed to be acquired through faculty-internal processes or the interviewees' own research, teaching or personal interest. The discourses also showed that stakeholders within the HEI applied the principles of sustainability to their personal lives, often with a point of departure from their own teaching or research. Thus, the sensemaking of sustainability was, in part, shaped collectively by the context of institutions and in part by a personal understanding of sustainability issues which corresponds to the literature on macro-level discourses and individual sensemaking (see Brown *et al.,* 2015; Ivanova-Gongne *et al.,* 2022b).

. The CDA analysis of the interviews showed that staff members, in their sensemaking, are influenced by surrounding discourses, including international (Agenda 2030-related), national (Unifi-related) and local (project- and discipline-related) discourses and that sustainability-related sensemaking continues to be in flux. The analysis also shows the extent to which powerholders in an organization can differ with regard to framing (the promotion of) sustainability. Illustrating "discursive struggles" (for a discussion, see Groop, 2021) aimed at moulding and fixing the concept of sustainability within an HEI highlights the importance of not bypassing the concept of sustainability, assuming that it is a concept understood and framed similarly by everyone. As the findings indicate, sustainability can be made sense of in a variety of ways. Efforts to promote

sustainability within an HEI would benefit from some level of joint understanding with regard to key concepts to ensure that key targets and indicators are interpreted in the same way. In the absence of such a joint understanding, the HEI runs the risk of multiple interpretations and, at worst, targets not being achieved at all.

Many of the interviewees in the present study were either directly involved in research on sustainability topics or regarded their research as sustainability-focused or indirectly linked to promoting SDGs. However, the need for funding for more sustainability-focused research, which has also been widely discussed in previous studies (Aleixo *et al.,* 2018; Leal Filho *et al.,* 2020), was also highlighted by the interviewees. The same trend could also be discerned within teaching, where the dimensions of sustainability that are incorporated vary between faculties and disciplines. The results of this study show that the teaching personnel express an interest in and awareness of sustainability-related principles and, at least sporadically, include sustainability-related topics in their courses. Obviously, there is a need to upscale the sustainability-related efforts in teaching through interdisciplinary events such as seminars or workshops or place more focus on sustainability and SDG lectures. However, incentives and lack of time for teaching staff may remain a challenge (cf. Ávila *et al.,* 2017).

Regarding the SDGs, the teaching and research staff gave priority to quality education, gender equality and good health and well-being. An emphasis on educational quality is obvious for university personnel, as an HEI's main responsibility is knowledge dissemination, including sustainability-related insights (UNESCO, 2016). Against expectations, SDGs were mostly approached in the social science disciplines, which explains the focus on gender equality. The natural science representatives, however, were more focused on good health and well-being due to the HEI's strong research expertise in medical science and the relation of other studies to overall human well-being. Awareness of SDGs across universities is a common issue according to various research studies (Fleacă *et al.,* 2018; Janoušková *et al.,* 2019; Leal Filho, 2020; Bruns *et al.,* 2019; Dziubaniuk *et al.,* 2022b). This study illustrates that many staff members had a positive attitude regarding sustainability and SDGs in research and teaching, whereas others referred to sustainability as a forced agenda, which is also discussed by Korhonen-Kurki *et al.* (2020) regarding Finnish HEIs.

6. Conclusions

The study at hand explores sustainability-related discourses among stakeholders within a small Finnish university, as well as individual sensemaking regarding sustainability, its role in stakeholders' daily and professional lives and the strategic approach of the HEI to promote sustainability. The discourse analysis conducted for this study showed linkages between the teaching and research stakeholders' sustainability-related professional activities and their individual sensemaking of sustainability. However, the lack of a strong institutionalized framework of sustainability implementation in the organization points to misalignment of the understanding of sustainability and SDGs with the HEI's strategic goals towards sustainability. The study finds

that the HEI has a strategic vision for sustainability and that it refers to the SDGs in its normative documents and that such a vision should be better communicated to internal stakeholders to improve their understanding of the formal approaches framing sustainability. Obviously, the framework of a sustainability strategy is needed to direct the HEI's activities and to increase its sustainability impact, but its structure should take into consideration the internal stakeholders' sustainability values.

6.1. Conceptual contributions and notes for educators and policymakers

This research adds to the literature on sensemaking about sustainability explored in the context of an HEI (Bien and Sassen, 2020; Degn, 2018) and expands a general body of literature on education for sustainable development (Leal Filho, 2020; Franco *et al.,* 2019;). This study explores a multiplicity of voices of HEI's stakeholders that corresponds to research calls by Bien and Sassen (2022) to explore discourses of the wider variety of university employees. The results of the study extend the discourse analysis approach applied to individual sensemaking exploration regarding sustainability understanding from an individual perspective and highlight how it is contextual to a specific organization (Cukier *et al.,* 2009; Degn, 2015; Groop, 2021). Additionally, this research contributes to the general individual sensemaking literature (Ivanova-Gongne *et al.,* 2022b; Whittle *et al.,* 2022).

This study provides insight into the managerial activities of HEIs and points to the need for a mix of top-down and bottom-up approaches to HEI strategy planning and implementation, which remains an issue in many educational institutions (Ramísio *et al.,* 2019). As such, the study continues the discussion of the most common challenges related to sustainability implementation (Aleixo *et al.,* 2018; Leal Filho *et al.,* 2019) that HEI executives should consider. The teaching and research staff of HEIs may find this study useful in their re-evaluation of their own approaches to sustainability and their alignment with the strategic vision of HEIs. The findings illustrate that knowledge of normative principles of sustainability can be useful for writing funding applications and interdisciplinary collaboration, whereas individual sustainability values can be reflected in teaching and research practices. The county context of this study contributes to the discussion of the challenges of implementing an institutionalized sustainability framework across universities, which, however, may face challenges due to the different understandings and different strategic expertise of the universities. Hence, it is imperative for university leadership to dedicate additional time and resources to comprehend the individual-level sensemaking of sustainability among both employees and students. Furthermore, effective communication of the strategic perspective and the broader national discourse should be conveyed more explicitly to both employees and students. While integrating such a top-down and bottom-up approach is a complex endeavour, embracing this integrated approach is crucial for fostering sustainable practices, as it relies on the interrelatedness of sensemaking and (organizational) action (see Ann Glynn and Watkiss, 2020). Our findings also showcase to policymakers how sustainability can be communicated among universities at the national level by showing the example of interuniversity initiatives such as

UNIFI. This study also indicates how a variety of stakeholders make sense of sustainability, something that should be considered in policy development regarding educational programmes aimed at sustainability and SDGs.

6.2. Limitations and future research suggestions

This study is delimited to the discourses explored within a specific HEI in Finland. Thus, we call for more international comparative case studies to investigate discourses on sustainability understanding that may vary due to cultural specifics and national priorities concerning sustainability challenges in different countries (Friman *et al.,* 2018; Korhonen-Kurki *et al.,* 2020; Ivanova-Gongne *et al.,* 2022a; Dziubaniuk *et al.,* 2022a). The research endeavour takes an interest in executives, teaching and research staff of the HEI, highlighting that the holistic understanding of sustainability could be articulated better if all stakeholders were given a voice to express their opinions regarding sustainability and SDGs (Bien and Sassen, 2020) (i.e. through participation in the research by students, administrative staff and external stakeholders). This study is mostly focused on discourses of sustainability understanding and has only, in part, touched upon the theme of a university's sustainability identity and image. However, this can be an important departure point for future research, as many educational institutions struggle to change their identities to showcase their societal impact (Degn, 2018; Findler *et al.,* 2019).

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