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## **Sustainable development goals in university strategies: making sense of sustainable development in the context of a Finnish university**

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### **Abstract**

Universities across the world adopt sustainable development goals (SDGs) as part of their strategies for achieving sustainability throughout their various departments or subjects. However, each department may understand sustainability and, as a result, the SDGs differently. These differences may consequently impact how the Goals are operationalised and implemented in practice. This qualitative study aims to review and analyse how sustainable development and SDGs are understood and implemented based on the university strategy in the context of Åbo Akademi University, Finland. Specifically, by interviewing the teaching and research staff, the research investigates how the staff of the university make sense of sustainable development and SDGs, as well as whether their understanding aligns with the overall strategy of the university. The findings highlight issues that higher education institutions may need to address in the communication and popularisation of sustainable development.

**Key words:** sustainable development goals, sustainable development, higher education institution, university strategy, Finland

### **1. Introduction**

The implementation of sustainable development (SD) in universities' curricula and strategies has been researched to some extent, but more in-depth knowledge is still needed (e.g., Ramisio et al. 2019; Sonetti et al. 2019). Efforts to integrate SD into higher education institutions (HEIs) have to involve all relevant actors in strategy re-thinking (Franco et al. 2019). Moreover, shifting the academic mission from being a public relations instrument to a manifestation of SD requires more emphasis in research (e.g., Wilhelm et al., 2019; Giesenbauer and Müller-Christ 2020). A similar issue concerns the alignment of a university strategy to Sustainable Development Goals (SDGs) to form a framework for addressing societal, environmental, and economic challenges in teaching, research, and campus activities (Fleacă et al. 2018; Moon et al. 2018; Filho et al. 2019b). For universities to fully embrace SDGs, several actions are required; these actions include the modification of the curriculum, the improvement of pedagogic approaches, and the establishment of effective communication (e.g., Purcell et al. 2019). Several studies on SD in universities provide practical and conceptual suggestions. These suggestions include teaching the students job-related SD skills (Tasdemir and Gazo 2020), understanding internal and external activities and actors, as well as networking with university stakeholders to disseminate knowledge on SD (Franco et al. 2019).

The implementation of SD through the university strategy may be hindered by various understandings of SD and diverging priorities across subjects (Albareda-Tiana et al. 2018; Bien and Sassen 2020). These differences originate from the various conceptualisations of sustainability in the context of each subject. Due to they operate using the SD terminology related to their disciplines, different subjects address SD to different extents. This causes the relative isolation of the subjects from the general SD strategic orientation of the university and, consequently, weakens the university's communication of its strategy.

This book chapter presents a study that aims to investigate the alignment of strategy with the implementation of SD and SDGs at a university. To address the issue, this chapter explores *how the concepts of SD and SDGs are understood and prioritised in different university subjects, as well as how these understandings contrast with the university strategy*. The research is based on empirical data derived from Åbo Akademi University (ÅAU), Finland. The data were collected via interviews with university staff members representing the strategic profiles of the university, the deans of the four faculties, and university representative on matters related to sustainable development.

The findings highlight the assessment of university activities to address SD and SDGs and illustrate the challenges and best practices that may be of interest to other HEIs. In addition to contributing to the conceptualisation of SD in the context of HEIs, practical implications for the internal communication of the university strategy are discussed, as well as the implementation of an interdisciplinary approach to SD and the dissemination of knowledge about SD and SDGs.

## **2. SD and SDGs in higher education institutions**

The Brundtland Report (1987 p. 41) defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” In 2015, the United Nations delineated seventeen Sustainable Development Goals that address economic, social, and environmental factors and aim to end poverty and attain balanced development by 2030 (SDGs 2015). Achieving these goals requires a holistic approach, in which various actors around the globe take action (The 2030 Agenda, 2015). Higher education institutions are of the utmost importance in this process. Specifically, HEIs should (a) mitigate negative environmental, economic, and socio-cultural impacts and improve health and well-being and (b) spread sustainability-related values globally (Alshuwaikhat and Abubakar, 2008; Velazquez et al. 2006). In recent years, several initiatives and alliances have been created to encourage, guide, and support universities to internally and externally embrace sustainability in research and education, operations and governance, and community engagement (Dagiliūtė et al. 2018; Fissi et al. 2020).

First of all, HEIs generate and disseminate research- and evidence-based knowledge, solutions, and innovations that are vital to the achievement of all SDGs and the creation of “a greener” world (Mader and Rammel 2015; SDSN 2017). Moreover, according to the UN Agenda 2030, universities play a key role in developing and establishing locally relevant and culturally appropriate teaching and learning (Filho et al. 2019a). Embedding SDGs in the curriculum can enhance students' understanding of the importance of SD and motivate them to reflect on their personal ethical positioning (Kopnina 2018). In this way, universities can increase the number of actors practicing and promoting sustainability (Filho et al. 2018a; Filho et al. 2018b) and prepare

future leaders to better plan, cope with, and find solutions for the issues threatening the planet (Mulà and Tilbury 2009; Marques et al. 2019; Dziubaniuk and Nyholm 2020). Furthermore, education is interlinked with all SDGs and is specifically addressed by SDG 4, which calls for HEIs to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (SDGs 2015).

Universities, like other organisations, bear the responsibility to mitigate their operation-related impact (Amaral et al. 2020). In particular, HEIs are owners of physical premises that consume resources, contribute to increased greenhouse gas emissions, and generate waste. Filho et al. (2019b) distinguishes between four operations-related dimensions: green building – the planning, construction, utilisation, renovation, and demolition of buildings; waste management – recycling and disposal of waste generated by offices, laboratories, and leisure and residential buildings; sustainable procurement – the acquisition processes for goods and services; and sustainable mobility – business travel-related activities and commuting. Furthermore, HEIs are often major employers and expected to implement administrative structures that effectively manage people with diverse social, economic, and cultural backgrounds (Amaral et al. 2020). These stakeholders should be given an equal opportunity to succeed in their positions and feel safe, as well as being encouraged to participate in decision making. Higher education institutions hold a unique position within society. This allows them to promote local, national, and international community engagement by sharing values, promoting collaboration, and making stakeholders aware of the importance of adopting sustainable practices (Van Weenen 2000; Blanco-Portela et al. 2017; Fissi et al. 2020). By doing so, universities can bring all stakeholders on board and encourage collaboration in achieving SDGs.

Finally, when analysing sustainable governance, Bauer et al. (2020) chose five dimensions: (a) politics: how sustainability is implemented within HEIs to support their long-term goals; (b) profession: what principles and standards should be included in SD and how they can be implemented in the day-to-day practices; (c) organisation: how collaboration between network actors can be encouraged; (d) knowledge: how knowledge on pressing problems and goals can be generated and employed; and (e) visibility: how an awareness of SD among internal and external stakeholders can be increased. These categories can help to assess organisational capabilities for the implementation of SD and governance.

Nevertheless, several barriers exist that prevent universities from fully embracing sustainability. HEIs may lack a proper institutional framework with which to clarify the intent of the institution (Lozano et al. 2015) and motivate a holistic approach by integrating the functions of research and education, operation, governance, and engagement (SDSN 2017). Many universities face resource constraints, such as limited financial, human, and technological resources (Jorge et al. 2015; Holgaard et al. 2016). This is further exacerbated by the fact that performance reviews do not reward sustainability practices in teaching or research programs (Ávila et al. 2017). Moreover, there is limited reporting on sustainability due to the lack of mandatory regulations and underdeveloped relationships with internal and external stakeholders (del Mar Alonso-Almeida et al. 2015; Blanco-Portela et al. 2017). Amaral et al. (2020) further emphasise the lack of support from the administration, as well as resistance from staff and students. Different understandings of SD may also confuse its conceptualisation (Reid and Petocz 2006; Albareda-Tiana et al. 2018; Bien and Sassen 2020). Subject leaders and pedagogic staff may have different perceptions of sustainability that are not aligned with those introduced in the university strategy. Such

misconceptions may prevent, for instance, interdisciplinary collaboration within and outside the university.

To summarise, universities play a key role in achieving SDGs. HEIs generate and share research-based knowledge to increase public awareness and advocate for sustainable practices. They also operate and govern sustainably and promote community engagement. These aspects of the university are interconnected and require a holistic and systematic approach (e.g., Velazquez et al. 2006), specifically first developing an institutional framework for sustainability (Fissi et al. 2020) and then integrating it into the strategies. In addition, strategy-, governance-, misconception-, and resource-related obstacles may hamper universities' attempts to contribute to the achievement of SDGs.

### **3. Sustainable development in the Finnish context**

Since the 1990s, sustainability has been introduced in the major stages of the Finnish education curriculum, from pre-school to university levels. In the beginning, the focus was primarily on environmental sustainability, but gradually, other spheres of sustainability were included (Salmio 2009). Hence, the students who belong to the generation that has been educated about sustainability since primary school expect and demand that sustainability issues be investigated and discussed in their bachelor's and master's studies.

In 2006, the Finnish Ministry of Education and Culture (MEC) reformed the national strategy for education, orienting it even more clearly toward sustainable development. In 2013, this strategy was framed as Society's Commitment to Sustainable Development, which promoted international collaboration between the public and private sectors. Its key targets are formalised in the document "The Finland we want by 2050", issued in 2016 (Prime Minister's Office 2019). This document highlights the environmental sustainability of the country and, more importantly, recognises the role of Finland in global society in facing the challenges of SD for future generations. Starting in 2017, the MEC developed a sustainable development policy for the Ministry and its administrative branch. The development of the policy included an open consultation process consisting of workshops and online consultation with actors and stakeholders in the Ministry's administrative sector. The policy focuses on the equal realisation of educational rights; high-quality early childhood education and care; and higher levels of competence and education, continuous learning, access to information, cultural rights, well-being, and participation (Ministry of Education and Culture 2020).

Simultaneously, UNIFI (co-operational organisation for the Finnish universities) worked on a mutual declaration for all Finnish universities concerning how these universities should work toward the goals of Finland 2050 in research, teaching, and daily activities. This declaration stresses the role of universities as key players in creating new knowledge, as well as educating future experts and informed citizens (Unifi 2020). Based on, among others, the UN SDGs, the declaration includes twelve theses aimed at shaping a mutual mindset and concrete actions within the universities. The theses are divided into five themes: research, education, societal interaction, management, administration, and campus activities, as well as the preconditions for university operations. The theses are intended as drivers mainly of activities within universities, but they also include a focus on the national evaluation model, as well as the assessment and auditing of universities. Each of these is complemented by a list of key measures that universities should adopt. These are, however, only recommendations. The theses aim to share and promote best

practices on sustainable development among Finnish universities and develop a platform for international collaboration in the sphere of higher education.

#### **4. The case of Åbo Akademi University: a methodological approach**

Finnish universities retain relative independence in focusing on areas of sustainability according to their expertise and scientific focus. The premises of SD are frequently reflected in the strategy of the university. The strategy of Åbo Akademi University was revised in 2020 for the years 2021–2030. The vision for 2030 emphasizes ÅAU's role in research and education for a sustainable habitat, especially in the Baltic Sea Region, as well as an inclusive and open society. Among other things, the university research should contribute to reaching the SDGs. Through education, the university should mold ethically responsible citizens, researchers, and professionals with an understanding of the demands of nature and human beings (Åbo Akademi, 2020). The strategy is complemented by a concrete action plan. In addition, ÅAU has set four strategic research profiles aimed at being cross-disciplinary and closely linked to educational programs. The names of these profiles signal the importance of sustainability: Solutions for Health, Technologies for a Sustainable Future, The Sea, and Minority Research. The profiles serve as indicators of the university expertise and unite thematically interrelated subjects to address scientific challenges and societal issues related to the profile theme.

Considering the aims and explorative nature of the study, a qualitative approach is appropriate in attempting to understand university personnel's sensemaking on sustainable development and its implementation in university strategy and practices. In this study, sensemaking is used (Weick 1995; Weick et al. 2005) as a methodological approach or lens, rather than a theory, and follows Mills et al.'s (2010) critical sensemaking framework. "Critical sensemaking provides a framework for understanding how individuals make sense of their environments at a local level while acknowledging power relations in the broader societal context" (ibid. p. 190). Thus, the respondents make sense of the university environment at a local level, while framing it in a broader societal context of sustainable development.

To address the research issues, empirical data were collected from university deans and teaching and research staff. A total of 13 semi-structured interviews were conducted (see Table 1) from October to December 2020. Eight of the interviews were conducted with representatives of the university's four strategic profiles. These respondents possessed knowledge about the subjects included in the strategic profiles and how such were developing. All respondents had experience in teaching and research in the university. The respondents were chosen in order to obtain an equal representation of each of the four profiles – two representatives per profile. ÅAU's strategic profiles were introduced with the core aim of contributing to societal and environmental issues (Åbo Akademi 2021); thus, they inherently relate to the focus of this study. A more detailed description of the profiles is available on the university webpage (ÅAU SRP 2021).

Information was also collected from the deans heading the four university faculties. The interviews with the deans allowed for a deeper understanding of the implementation of SD in the university strategy. Finally, an interview was conducted with the ÅAU representative in affairs related to sustainable development, who has participated in the UNIFI theses development project. This interview provides a broader, country-level perspective.

**Table 1.** The respondents' roles and affiliations

<b>Academic role</b>	<b>ÅA Strategic research profiles</b>	<b>Theme clarification</b>	<b>Number of respondents</b>
Teacher/researcher	Technologies for a sustainable future	Chemical engineering and material aspects in the bioeconomy	2
Teacher/researcher	Solutions for health	Materials and technologies for health – from molecules to devices and drug delivery systems	2
Teacher/researcher	Minority Research	Complexities involved in the production and construction of minority positions, identities, and rights	2
Teacher/researcher	The Sea	Marine and maritime research – society, nature, and technology	2
<b>Other interviews</b>			
<b>Role</b>	<b>Affiliation</b>	<b>Clarification</b>	<b>Number of respondents</b>
ÅAU representative in fora related to sustainable development	ÅA Centre for Lifelong Learning	Responsible for co-operation with public and private sectors, projects development, and innovations in education	1
Faculty deans	Art, psychology, and theology		4
	Education and welfare		
	Social science, business, and economics		
	Science and engineering		

The interviews were conducted in English and Swedish (depending on the respondents' preferences) via Zoom due to national restrictions concerning the COVID-19 pandemic. The interviews lasted from 30 minutes to one hour. They were recorded with the permission of the respondents and transcribed for ease of analysis. The interview guide was divided into three key themes: understanding of sustainable development, knowledge of SDGs, and insight into the university strategy in relation to SD. The issues discussed during the interviews were the following: the definition of sustainable development, the inclusion of sustainability in research/teaching, personal attitudes towards sustainability, the relevance of sustainability dimensions and SDGs for the respondents' research/teaching, knowledge of and opinions about SDGs, the implementation of SDGs and sustainability principles in university strategy and the daily work of employees, and communication of SDGs to employees and students. The interviews with the deans included additional questions concerning their attitude to SD within university

governance and the curriculum. In addition, an interview with the ÅAU representative in SD affairs was directed toward explaining the role of UNIFI's Theses in the promotion and implementation of SD and SDGs in universities across the country.

Content analysis was applied to interpret the collected data. Content analysis is used in a wide variety of approaches, e.g., qualitative, quantitative, inductive, and deductive, and with multiple sources of data, such as interviews, annual reports, and other textual documents (Duriiau et al. 2007). In this study, qualitative content analysis is used to understand the “deeper meaning embodied in the text” (ibid., p. 6). Hsieh and Shannon (2005) describe three core approaches to content analysis: conventional, directive, and summative. While the conventional approach is more inductive and avoids using preconceived categories, a summative approach, on the other hand, focuses on “identifying and quantifying certain words or content in text” (ibid. p. 1283). This study followed a directive approach, which lies in between the conventional and summative approach. A directive approach is useful when some theory exists about the phenomenon, but it is incomplete. The existing theory is used to delineate key concepts, such as initial analysis categories (Hsieh and Shannon 2005). Thus, for this study, the analysis followed topics that were derived from the literature and discussed with the respondents.

The analysis consisted of the following steps: first, the entire text of the interviews was read in order to identify the passages of text that corresponded to the topics in focus. Second, according to the directive approach, the most relevant information containing the key concepts and expressions was derived from the text. Finally, the obtained data were interpreted by moving back and forth between the data and existing theory in order to understand the deeper meaning embedded in the interviews and outline new findings, as well as findings that confirm the existing theory. After each of the researchers had independently analysed the data, the findings were discussed to ensure their credibility.

## **5. Scrutinising the understanding of sustainable development**

During the interviews, the respondents were asked the way in which they understand the concept of SD and how sustainability is embraced in their research and teaching. Since the respondents represent different subjects and have different expertise, they, naturally, attempted to make sense of sustainability within the scope of their own scientific discipline (Bien and Sassen 2020). The respondents demonstrated knowledge of SD's conventional definition (though to different extents), as stated in the Brundtland report (1987), and attempted to construct their own definitions around it. The summarised definition based on the interviews can be represented as follows: *to maintain the good current quality of life in a stable society, without harming nature and exploiting natural resources, to sustain this situation into the future for the upcoming generations*. The respondents referred to the environmental, social, and economic areas of sustainability. However, the priorities of these three dimensions differed according to the research profile of the respondent. All respondents associated SD, to some extent, with their own research, indicating how their current work contributes to SD. Representatives of social sciences emphasised social sustainability, such as issues of inclusion, equality, racism, diversity, and social justice. They also added culture as a fourth dimension of sustainability. Respondents related to engineering pointed to their research on sustainable materials, “green” chemistry, renewable energy, and other technologies aimed at the improvement of human life and the biosphere. Respondents with



expertise in medicine and medicine-related technologies stressed the contribution of their innovations to well-being and the economy.

The interviews show the significance of the economic aspect of SD in society. It is the easiest way to measure the impact of SD in the short term. As stated by one of the deans, it may be difficult to take care of the environment or fulfil social obligations without economic viability. A lack of financial resources may prevent universities from implementing SD in their practices (e.g., Jorge et al. 2015; Holgaard et al. 2016). From the research funding perspective, in many funding applications, it is mandatory to explicate sustainability's impact or indicate which SDG is relevant to the research proposal. This is perceived as confusing and annoying, especially if the research does not directly address dimensions of sustainability. A lack of knowledge of SD then leads to difficulties in articulating the SD contribution. There is a risk of greenwashing, in which applicants list certain SDGs in order to receive funding, without actually understanding or applying them in practice.

Surprisingly, not all of the respondents were aware of the UN SDGs. Respondents from the social sciences demonstrated the most knowledge of SDGs. Respondents were asked to list the five SDGs they perceive as the most important. Although most of the respondents could not name the Goals as they are stated by the UN, they described them with their own words. The most frequently mentioned SDGs address climate change (G.13 Climate action), social justice (G.16 Peace and justice strong institutions), life in the seas (G.14 Life below water), education (G.4 Quality education), gender equality (G.5 Gender equality), poverty (G.1 No poverty), forest or “something green” (G.15 Life on land), and partnership (G.17 Partnership for the goals). The order of importance of SDGs was linked to the scholarly discipline of the respondent; e.g., those from industrial management and physics emphasized SDGs related to clean energy (G.7 Affordable and clean energy) and innovation and industry (G.9 Industry, innovation and infrastructure). Those from disciplines related to the to the Sea profile prioritized G.14, Life below water, while a minority of profile representatives highlighted G.16, Peace and justice strong institutions, in addition to education, partnership, and gender equality. The respondents with the least knowledge of SDGs referred to those Goals that are most often discussed in the media, such as climate change, gender equality, and poverty in developing countries.

Despite varying perceptions of SD and SDGs, the respondents agree that the university curriculum could include more insight into these concepts. However, SD inclusion in the HEI curriculum should be a gradual process, rather than being forced rapidly. As noted by one of the deans, ever-busy professors may find it challenging to update their courses promptly. Nevertheless, the pedagogic approach to sustainability could include a broader perspective on its meaning to illustrate the interconnectedness of the environmental, social, and economic areas. With this approach, for instance, students can better understand why the procurement of products or materials with “green” labels can be beneficial for the company, society, and environment. Or the impact of climate change on immigration could be illustrated. Knowledge of SD would also help students in their future jobs since the current labour market shows an increased demand for employees with a knowledge of sustainability (Tasdemir and Gazo 2020; Wallenius et al. 2020).

Topics related to sustainability are already represented in most ÅAU courses. However, some teachers may not refer to such using the term “sustainability” but using other terminology. Using a commonly accepted term will help students better understand SD. Teaching SD can aid students in developing personal ethical positions and understanding their roles in society (Kopnina 2018).

The research practices would benefit from SD popularisation within the university. For instance, an interdisciplinary approach to organising scientific events (workshops or seminars) dedicated to SD could be useful for researchers in order to gain an understanding of the activities of other subjects and, hence, open avenues for future collaboration. A significant part of HEI governance is support for interdisciplinary collaboration (Bauer et al. 2020). According to the respondents, many researchers are not familiar with the research being done in other subjects, which limits their potential to contribute to interdisciplinary research, while experts with knowledge of SD related to a specific subject could be engaged. Some respondents suggested inviting SD specialists who could lead workshops relevant to their field and, more practically, train researchers in completing grant applications using information on SD and SDGs. By inviting such specialists, teachers and researchers might benefit from a better understanding of how SD is related to their field and its relevance to their research endeavours.

Communication within a HEI plays a key role in the popularisation and implementation of SD in teaching and research (e.g., Verhulst and Lambrechts, 2015). The university strategy, as a document guiding the university in its development, can be one communication tool. ÅAU's renewed strategy, adopted in 2020, states that the university "endeavours to enhance diversity, inclusion, equality, and sustainability" (ÅAU, 2020). This strategy aims to direct research and teaching into solving complex social and environmental issues and contributing to the achievement of the UN SDGs. The SDGs are the guiding principles for developing the study and work environment. This document also promotes cross-sectoral international collaboration, an interdisciplinary form of collaboration between faculties, and active interaction among universities in the Baltic region and Nordic counties. Moreover, the university has an implementation plan aimed at organising projects and funding research related to SD.

Although specific SDGs are not mentioned in the document, the strategy reflects them in the spheres of research, education, and administration. The document gives general directions for academic development, but it cannot force teachers and researchers to conduct their work in a specific manner. Among the respondents of this study, only the deans had detailed knowledge of the university strategy. The rest of the respondents had seen this strategy at least once or knew that "something like that existed" but were not familiar with its content. Thus, as the ÅAU's strategy is relatively new, time is required to achieve any substantial results from its implementation. However, as mentioned by one of the deans, the question of how we define sustainability in the context of ÅAU remains open. Obviously, a common understanding is still missing.

## **6. Implementation of SD and SDG in a university context**

The implementation of SD and SDGs among the HEIs in Finland is supported by the theses of sustainable development and responsibility introduced in December 2020 (Unifi 2020). This set of theses is aimed at improving the conceptualisation and promotion of SD. The theses embrace the key themes related to academic life, i.e., teaching, research, administration, societal impact, and cooperation, which all could be improved to address SD. According to the interviewed ÅAU representative who participated in the development of the theses, they emphasise sustainability in the academic world. They are developed to create a common ground or a benchmark for the universities to use in taking sustainability to another level. Although Finnish universities already apply the premises of SD in their activities, the perception of sustainability also differs between universities. The theses are not mandatory but serve as discussion openers within the universities.

In fact, SDGs are reflected in all the theses to some extent. They point to issues in the social, environmental, and economic spheres but relate them to the context of HEIs. Compared to SDGs, the theses present concrete action examples or measures that the universities can implement. The theses do not call for HEIs to address all SDGs at once. Rather, the universities may decide, based on their competencies, which SD challenges to address. To make this process efficient, universities may assess their strengths and competencies to understand in which way to direct their research, pedagogic, and administrative practices. The theses do not force universities to adopt a one-size-fits-all action plan. Rather, they require critical and systematic thinking regarding the adoption of such a plan. Another important achievement is that the theses emphasise HEIs as key actors in the dissemination of knowledge and practices of SD and SDGs in society, as supported by similar studies (Velazquez et al. 2006). Universities are motivated to adopt the theses due to the emphasis on SD in academia makes the university more attractive to students, strengthens the university brand, and generates more trust from the society and the international educational community.

In addition to leadership, the implementation of SD in HEIs requires employee motivation. Although universities realise the benefits of SD, the question of how to engage employees in SD and SDGs endorsement remains. Moreover, SD should be implemented not only in teaching and research but also in daily university activities (Filho et al., 2019b; Amaral et al. 2020). Employees should be able to present their SD-related initiatives, and this requires effective reciprocal communication systems between employees and HEI executives (e.g., Filho 1999; Van Weenen 2000). For instance, one respondent related to the Solutions for health profile mentioned their lab's initiative to establish a plastic waste recycling unit. Since their laboratory uses a large amount of plastic, they decided to recycle clean but used plastic rather than disposing it in the burnable garbage. Thus, they asked the university to establish a recycling unit for non-contaminated plastic to address environmental sustainability. Another sustainable step would be to replace plastic with glassware, but this would be costly and require more effort from the researchers. Nevertheless, a communication framework should be established to spread information and best practices regarding SD in efficient ways. In addition, since ÅAU involves international staff and students, one important step is to distribute information in both languages used in the university: Swedish and English. International staff should be included in decision-making related to SD implementation.

According to the respondents' suggestions, motivation can be also increased by initiating competitions and prizes for SD contribution. Some of the respondents assumed that special funds to support SD initiatives of employees could be created. This may concern not only contributions to research or teaching but also more practical SD implementation solutions on the campus, such as the procurement of "greener" equipment or more effective waste management on the campus. As the respondents found it difficult to recall how the university deals with SD on its premises, sustainability practices should be more visible or even advertised on campus. Most of the respondents pointed only to garbage recycling as a sustainability practice on campus.

## **7. Discussion: Aligning university strategy and sustainability**

Finland has underlined sustainability at all levels of education since the 1990s (Salmio 2009). Our study highlights how the perception of SD by academic staff at ÅAU can be aligned with university strategy.

One important task of HEIs is dedication to the achievement of SDGs. Because the Goals are interconnected, universities can select to focus their strategic development on specific SDGs according to their capabilities. These Goals should be reflected and promoted in the university strategy. Strategy, as a declaration of the university's direction of development, is an important promotional tool with which to spread SD initiatives at all levels of the HEI. The strategy also guides research on and the teaching of sustainability. However, this study illustrates that employees may not be familiar with the university strategy, and some may even not be aware of the SDGs. Thus, if the university intends to increase SD commitment, employees should know how its general strategy embraces SD and SDGs.

Our research shows that different understandings of SD within different disciplines may constrain SD implementation in HEI (Reid and Petocz 2006; Wright and Horst 2013; Bien and Sassen 2020). Thus, a common benchmark is still needed to increase the understanding of sustainability principles among all university subjects. The theses of sustainable development and responsibility (Unifi 2020) are an example of a cross-university initiative to enhance knowledge of SD in the universities and introduce a common conceptual framework.

The engagement of university employees in decision-making with respect to SD should be supported and motivated by the university governance system (Amaral et al. 2020; Bauer et al. 2020). Leadership is significant in this case and can be initiated by employees, as well as executives. The motivation of teaching and research staff to contribute to SD in HEI can be heightened by supporting their research with funding, competitions, prizes, and interdisciplinary scientific events. Interdisciplinary collaboration may also help disseminate knowledge on SD and SDGs to the students (e.g., Tasdemir and Gazo 2020) and increase the research potential of the academic staff.

Communication within HEI should be organised in such a way that all stakeholders can be informed about the university SD initiatives. As universities play a significant role in SD education (SDSN 2017; Filho et al. 2019a), university practices intended to achieve SDGs should be manifested to external (e.g., private and governmental sectors and society in general) and internal stakeholders. Reciprocal communication between the university administration and other employees should be promoted. Academic staff should be able to provide suggestions related to teaching, as well as the practicalities of sustainable campus management (Filho et al. 2019b). Sustainable initiatives on campus could be better promoted and more visible for the staff by showing examples of best practices. However, these practices must also be systematically evaluated in search of better solutions.

The curriculum remains an important tool to address SD (e.g., Verhulst and Lambrechts 2015; Ramísio et al. 2019). This corresponds to the SDG 4 "Quality education", promoting quality and equal opportunities in education (SDGs 2015). The pedagogics of sustainability would benefit from an interdisciplinary approach, including a holistic understanding of the environmental, social, and economic pillars of sustainability. Thus, SD should be represented not only as something good for society and nature but the economy as well, since the economic sphere supports the development of the two other pillars. Teaching SD is more than knowledge dissemination. In fact, SD pedagogics helps students to realise their roles in society and have an influence on their ethical and moral stance (Kopnina 2018; Dziubaniuk and Nyholm 2020).

## 8. Conclusions

This empirical study aims to illustrate the potential challenges HEIs may face during their attempts to improve SD and SDG commitment in their organisations. Although the study is focused on one country context, i.e., Finland, the experience may be transferred to the context of other countries or HEIs. For a long time, SD has been embedded in the Finnish education system, and it may serve as a role model for international education institutions. However, some challenges related to the communication and implementation of SD still remain. Nevertheless, Finnish universities constantly attempt to strengthen the presence of sustainability in their curriculum, research, and daily functions at the university premises. The research findings suggest a direction for educational organisations aiming to implement sustainability at a deeper level and stress that the university strategy must correspond with the SDGs and SD in general. The process of enhancing the sustainability commitment should begin with an evaluation of HEI capabilities and an understanding of how the university staff makes sense of SD. It is important to acknowledge this understanding when developing the university strategy and choosing the direction of future development. In addition, universities may focus on specific SDGs according to their capabilities without attempting to address all Goals at once, since these are interrelated.

A valuable practice illustrated in this study is the introduction of a cross-university initiative to develop the Theses of SD and responsibility (Unifi 2020). This initiative reflects the university's commitment to improving communication on SD, setting a common benchmark for sustainability among universities, and opening up possibilities for future collaboration toward SD on the international level as well. The theses highlight the fact that HEIs should consider their stakeholders in the process of SD decision making and underscore the significant role of universities in handling social, environmental, and economic challenges.

The study also indicates challenges that the HEI may face inside its own organisation. According to this research, various subject representatives have differing understandings of SD. They also prioritise different aspects of SD depending on which of them are most relevant to their scientific fields. Although this conceptual disagreement may be a starting point for a future productive dialogue, some common understanding of sustainability could be introduced within the HEI. However, not all of the university staff may possess knowledge of SD and, especially, SDGs. The researchers may view SD as a burden or as information that solely needs to be mentioned in grant applications. This points to the lack of communication of SD principles among the subjects. These challenges may be addressed by introducing interdisciplinary events dedicated to sustainability and engaging specialists in SD within a specific subject. The university administration should develop an encouragement system for SD research and teaching. Sustainability should also be visible and actively promoted within the university's daily life. The university staff should witness good examples of SD on university campus beyond garbage recycling.

This study provides several research avenues via which to scrutinise SD and SDGs further in the HEI context. First, since every university and country context are unique in its approach to SD and SDGs, more research is needed on the role of university strategy in addressing these issues. Country-specific best practices in modifying the system of education to achieve SDGs could be of potential interest to other countries with similar challenges. Second, SD should not only be embraced in the university strategy. Rather, it can be viewed as an attribute of the university brand. This raises the question of how a university, along with its commitment to SD, should be seen from the perspective of society. Third, the literature on SD implementation frameworks in HEIs

also deserves more empirical studies. These studies would aid in framing theoretical perspectives on embracing SD in university activities and investigating their applicability in the contexts of different countries.

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