Building a sustainable future: ideas and perceptions of university staff

Tuija Koivunen, Taru Konst and Mervi Friman

Abstract

Purpose – The universities of applied sciences (UASs) in Finland play a significant role in providing skilled professionals with higher education degrees to meet the needs of the labor market and society as a whole. The purpose of this study is to determine what the staff in these universities consider the role of UASs in promoting sustainable development (SD) to be.

Design/methodology/approach – The qualitative research data were collected from a survey distributed among UAS staff in the spring of 2021. The data consisted of 831 responses to an openended question on how UASs could promote SD and a sense of responsibility for it. The method used for the data analysis was theory-led content analysis.

Findings – Staff at UASs are actively promoting SD in higher education and have many ideas on how to do this, which is encouraging. With further processing of these ideas and support from management, UASs can play a more important role in sustainability work and set an example for how to build a sustainable future.

Originality/value – The promotion of SD is a timely topic, and examples of SD implementation and good practices can promote discussion of the role of higher education institutions in SD promotion and highlight collective ways to promote it.

Keywords University of applied sciences, Sustainable development, Higher education institutions, University staff, Sustainability

Paper type Research paper

1. Introduction

Sustainability education and research in higher education institutions (HEIs) have undergone a significant transformation across the globe, with a notable shift toward addressing complex "wicked problems" and environmental challenges. HEIs are increasingly integrating sustainability into their curricula, research agendas and institutional frameworks. This emphasis is driven by the recognition that multifaceted issues such as climate change, loss of biodiversity, social inequality and resource depletion demand interdisciplinary collaboration and innovative solutions. Consequently, HEIs are equipping students with the knowledge and skills to navigate these challenges, aiming to foster a new generation of actors and leaders capable of addressing the intricate intersections of environmental, social and economic issues. Thus, the 21st century has witnessed the inclusion by HEIs of sustainability education and research, development and innovation (RDI) activities in their respective curricula. Simultaneously, the pressure from national and international sustainable development (SD) policies has steadily increased, along with the increase of wicked problems (problems that are complicated, lack inherent logic and have more than one correct solution), many of which are related to environmental issues. Because of the complexity of these problems, they need to be handled in a multidisciplinary way, and the uncertainty of the effectiveness of the solutions found must be accepted (Brown et al., 2010; Rittel and Webber, 1973).

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Received 7 December 2022 Revised 26 April 2023 15 September 2023 Accepted 29 October 2023

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The term "sustainable development" emerged globally in the 1980s as a response to a growing awareness of the need to balance socioeconomic development with environmental solicitude (Richardson and Erdelen, 2021; United Nations, 1987). Problems in bridging the gap between socioeconomic concerns and preserving and promoting the well-being of both people and the planet have steadily increased (UNESCO, 2016). A fundamental part of the UN's 2030 Agenda for Sustainable Development is the recognition of the significant role that education has played and can play in providing the necessary platform and mechanisms for all humans to be active agents of change. This document, with its 17 sustainable development goals (SDGs) linked to environmental and socioeconomic issues, informs a vision of a decent planetary future and contributes to its realization (UNDP, 2016).

There is a strong need to intentionally, strategically and continuously integrate or even mainstream SD into higher education. According to Agbedahin (2019), in practice, this means cross-cutting, multidisciplinary, interdisciplinary and multisectoral collaboration, reorganization and rethinking (Agbedahin, 2019). SD dimensions have been integrated into education and RDI activities as the main tasks of HEIs. The institutional approach to SD varies from overall integration to discipline-specific integration, and the pressure within and between SD education and research also differs. From ecological and economic perspectives, campus operations have been the focus of HEIs and have dominated their SD transition activities (Ávila *et al.*, 2017).

Among the universities of applied sciences (UASs) in Finland, the concrete and common way to promote SD is through the launch of the Program for the Sustainable Development and Responsibility of Universities of Applied Sciences within the framework of the global SDGs (Arene, 2020). The duty of the UASs in the Finnish educational system is to provide higher education and development for expert professional jobs based on the requirements of these jobs and to support the professional growth of students. UASs also have the responsibility of carrying out RDI activities, especially regionally (UAS Act, 932/2014). The annual contribution of Finnish UASs is 30,000 graduates, €220m worth of RDI and 9,500 person-years, which shows that they have a significant role to play in building the future of Finnish society. In addition to the pressure created by the UAS Act, the Ministry of Education and Culture in Finland, the Finnish Education Evaluation Centre and the Confederation of Finnish Industries have influenced the growing focus of UASs on SD.

In the role of HEIs as key agents in the transition toward a sustainable future, the main actors are the staff members of these institutions, who hold a range of different positions in the academic community. This study was motivated by the desire to listen to and understand the proposals and ideas of these staff members in relation to how UASs can promote SD and also to create a common sense understanding of SD both as a concept and actions that can be taken (also Pinto, 2018; Vuori, 2015). Therefore, this study aims to explore the perceptions and ideas of staff members working in Finnish UASs regarding the promotion of SD. The study is significant because there is not yet any follow-up on the implementation of the program, and the staff working at UASs are best placed to assess the latest developments in this regard.

2. Theoretical background

According to the law (2014), UASs have duties concerning a strong orientation toward working life and support of students" professional growth. In other words, the basis for the development of UASs' teaching and the other community service functions they perform is closely connected to the working life and the development of the respective regions in which they work. Tight connections to working life framed in terms of SD mean that there is an acute awareness in UASs of the European Green Deal process (European Union (EU), 2022), a process that guides the future of climate policy and is reflected in the regular self-evaluation of SD work. While UASs are multibranched, with several study fields cooperating with each other, the opportunities to offer cooperation with companies are wide and make

multidisciplinary projects possible. In these projects, students, staff and company representatives from different fields can work together, ensuring that different perspectives are taken into account, which is essential to ensuring that sustainability is properly accounted for. The key element in pedagogy at UASs is professional growth. The students progress in their studies via various different learning processes and gradually develop into skillful experts. Collaboration with companies supports the growth of students of expertise that can be applied in a real-life context. Connection to SD challenges of their own respective fields of study is realized for students, and students have the chance to encounter real-life tasks.

Sustainability has been increasingly integrated into HEIs' mission visions and strategies and has become the watchword in education, research and innovation. Some researchers even speak of the promotion of sustainability as the first mission of HEIs (Trencher *et al.*, 2014). International fora recognize the importance of education in the successful promotion of SD principles, as demonstrated by the inclusion of education as a stand-alone goal (SDG4) in the UN's 2030 Agenda for Sustainable Development and the setting of education targets under several other SDGs (Panait *et al.*, 2022). The ideas of genuinely SD-oriented universities have been presented in recent decades, and the remarkable forerunner role of HEIs has been recognized at the regional, national and global levels. Several studies have focused on HEIs' operations as a whole or on some of the duties of HEIs, such as providing education, conducting research, managing campus operations and forming external relationships. In this study, the focus group discussion involved only representatives of the staff of UAS. Thus, it is important to examine previous relevant studies.

In SD education, the framework is typically based on UNESCO's (2018) SD competence list (Rieckmann, 2018), and studies have explored SD curricula, pedagogical models and assessments (Mulà *et al.*, 2017; Franco *et al.*, 2019; Wals, 2014). The studies have shown differences by discipline, while the mainstream seems to be multi- and transdisciplinarity, which points to combinations of SDGs (De Welde, 2015). The thin nexus between education and RDI and the scant research on transdisciplinarity are two major challenges met by those who attempt to solve complex wicked problems related to SD (Wals, 2014; Annala and Mäkinen, 2017; Greig and Priddle, 2019; Friman *et al.*, 2021). According to Waas *et al.* (2010), monodisciplinary research on SD is still needed, but its connections with sustainability are important.

The RDI activities in Finnish UASs are mainly project-based and financed by external funding. Since the beginning of the 21st century, RDI guidelines have encouraged UASs to follow the SDGs in the UN's 2030 Agenda for Sustainable Development. RDI operations play a central role in the activities of UASs; the survey respondents in our data see them as an important and concrete way to promote SD in UASs.

Holding campus greening activities has turned out to be the easiest and often the primary way for HEIs to start SD operations. The concrete and visible results of such activities have promoted academic efforts (Friman *et al.*, 2022). According to Lemos *et al.* (2018), a sustainable campus must be like a living laboratory connecting research and teaching, providing the student with an environment that allows a balance between environmental principles and SD with social equality (Lemos *et al.*, 2018). Campuses can also serve as showrooms for innovative experiments and studies (Sneesl *et al.*, 2022). There is also a push from students with a growing concern and willingness to work toward a sustainable future. It is essential that educational institutions tap into this rising awareness and sense of responsibility by helping learners achieve the vital skills required for achieving sustainability goals. (Shaik *et al.*, 2022). HEIs can also integrate themselves into local and regional contexts by creating partnerships with companies and other non-academic organizations (Koehn and Uitto, 2015; Wals, 2014).

Aiming for a sustainable future requires UASs to be capable of anticipating future scenarios and promoting desired ones. HEIs' efforts to address the challenges posed by the pursuit

of SD illustrate their foresight and expertise in not only predicting the future but also about creating the future by gaining insights into likely futures, understanding alternative futures and forging ahead in one desired direction: a sustainable future. Foresight is key to answering the question of how to develop a shared vision of the future and jointly define a strategy to best adapt an organization to the context of sustainability. The application of foresight can increase universities' sustainability in the face of present and upcoming challenges (Elena-Pérez *et al.*, 2011).

The studies concerning HEIs as organizations sketch a picture of HEIs' future role as SD leaders. Velazquez and colleagues (2006) analyzed the different ways in which universities can become sustainable. Today, many milestones have been achieved in this process: HEIs have injected SD into their strategies; launched initiatives for redesigning education and research; and formed working SD committees. Lukman and Glavič (2007) called for actions besides strategy and mission-vision formulation. Daily in-house SD practices are important demonstrations of HEIs' SD efforts within their own communities and also send a strong message to HEIs' partners and stakeholders that they have made SD their priority (Lukman and Glavič, 2007; Ávila et al., 2017; Wakkee et al., 2019) or their "golden thread," which binds education as well as other academic duties, management and campus operations with the SDGs. Michelsen (2016) suggests that the whole-institution approach needs to be embedded in HEIs so that they have the opportunity to take over organizational responsibility and serve as an example in society. Education needs to be developed so that sustainability is a central issue. The role of professional development for higher education staff must be supported with respect to key challenges in sustainability (Michelsen, 2016). It is important that the operational aspects of teaching, research and institutional administration, as well as the educational aspect of sustainability education all be interconnected (Disterheft et al., 2012).

The importance of staff members' role in this transformation is undeniable (Lozano *et al.*, 2013). An academic's/lecturer's own perception of sustainability will influence if and how they teach it and, in turn, influence the quality of their students' understanding and potential practice of the concept (Christie and Miller, 2016). Through their roles in teaching and research, HEIs have a crucial role in advancing the goal of SD (Hudspeth, 2020; Barth and Rieckmann, 2016).

Barth *et al.* (2014) presented three scenarios for a sustainable university. The first involves HEIs with a strong orientation toward a society in which they are open and strong players. These universities are low-organization and are culturally inclusive. They are able and willing to cooperate with their partner universities and other actors in the region in which they're based. Proactivity and leadership are also typical features of these universities. The second scenario involves universities with orientations that are distant from society and that can be described as conservative and unchanging. Conservative universities remain distant from other actors in the region, are hierarchical in structure and consider themselves observers rather than active partners. The third and last scenario involves HEIs with an instrumental, market-oriented role in society and that aim to provide economic benefits. Profit-oriented universities see SD as a business opportunity and react to and respond to the economically viable SD challenges coming from the surrounding environment. They do not seek to direct actions but are content with playing a reactive role.

The dimensions of SD are often examined from the viewpoints of ecological, economic and sociocultural sustainability.

In 2016, Beynaghi and others also presented three scenarios concerning universities' relation to SD (2015–2024), with the following scenarios formulated through the structure of an expert panel. The first scenario involves socially oriented universities, whose priorities are to promote students' well-being, equality, a healthy diet and good education. They interact closely with actors in their region, especially with the third sector. Their students

have strong changemaker identities. The second scenario involves universities with an environmental orientation, which emphasizes the development of strategies and tools for solving existing physical environmental problems. The key themes of their operations are climate change, biodiversity, energy and transport. The third scenario involves economically oriented universities, which see sustainability as a result of economic growth, entrepreneurship and high employment rates. Such universities are characterized by active cooperation with companies. They use the multidisciplinary nature of the university, combining the technical and life sciences and well-being sectors with business. Proactivity is highest in socially oriented universities, and such universities react most strongly to economically oriented universities.

How can more sustainable HEIs be achieved? Previous studies have analyzed the drivers of and barriers to HEIs' successful SD operations. The following have been recognized as drivers in education: collaboration, interdisciplinary projects and high student engagement. In addition, versatile pedagogic approaches have inspired SD education (Lozano and Barreiro-Gen, 2021). As for the barriers to HEIs' successful SD operations, the most frequently cited were overcrowded curricula and limited teacher qualifications (Karvinen *et al.*, 2017; Mulà *et al.*, 2017; Lozano and Barreiro-Gen, 2021). In RDI activities, the creation of opportunities for multi- and interdisciplinary cooperation has been raised as an important enabling role. Moreover, venues for collaborative efforts, such as student projects, enable the implementation of successful SD operations, whereas a lack of collaboration between disciplines hinders them (Karvinen *et al.*, 2017). Management can enhance or prevent positive SD transformation both in-house and in relation to its stakeholders, partners and other companies (Sedlacek, 2013). Engagement, resources for moderating, communication and platforms for interaction have been shown to be the most important factors (Sammalisto *et al.*, 2015).

3. Research question, methods and data

The aim of this study was to obtain concrete views and proposals from staff at UASs regarding how UASs can promote SD and a sense of responsibility for SD more efficiently in the coming years. In addition, perspectives on how HEIs are currently promoting SD and the role of HEIs in spreading SD outside the institution were also explored. The research question was as follows: "What are the ideas and perceptions of staff at UASs regarding the contribution of UASs to SD in the coming years?

The methodology of this qualitative study is based on data gathered through a survey. The UASs' staff were invited to respond to the survey some months after the publication of the Program for the Sustainable Development and Responsibility of Universities of Applied Sciences. The objectives of the survey were to gather the views and ideas of staff at UASs on SD, obtain feedback on the implementation of the program and define milestones for future development. The invitation to the anonymous survey questionnaire was sent to all 24 Finnish UASs in January 2021, and responses to the questionnaire were received from all of them. In 2021, the number of UAS staff in Finland was close to 10,000. Altogether, 1,791 staff members responded to the survey. Their distribution across different roles within UASs was 45% in education, 32% in administrative and support services and 24% in RDI activities. The questionnaire contained 13 questions, but only the answers to the following open-ended question were analyzed in this study: "How can universities of applied sciences promote sustainable development and a sense of responsibility for it?"

The aforementioned question focused on the promotional factors for SD but also enabled us to identify the barriers to the attainment of the desired situation or the gap between the current situation and the desirable one. Overall, 831 responses (48% of respondents) to the question were obtained (Arene, 2021). There were two other open-ended questions in the survey:

- *Q1.* What kind of help or support would you need to be able to better apply sustainable development and a sense of responsibility for it to your work?
- *Q2.* What kind of training would you need to be able to better apply sustainable development and a sense of responsibility for it to your work?

However, the survey respondents' answers to these questions were not analyzed because they were quite narrow and did not offer rich information on what staff at UASs perceive to be the roles of universities, particularly UASs, as SD actors and promoters.

The data were analyzed using qualitative content analysis, a systematic and replicable research method to study qualitative data. It is based on explicit rules of coding to analyze patterns in data (Krippendorff, 2004). The analysis took a deductive approach, guided by the key themes of sustainability in HEIs identified in the literature. Thus, the data are read through these key themes to analyze how ideas of sustainability appear in the context of Finnish UASs.

The questionnaires without responses to the aforementioned survey question were removed, as were the questionnaires with responses that did not answer the question; that is, responses without answers to the survey questions were excluded from the analysis. The number of classified responses exceeded the number of respondents because of the multiple suggestions provided within one response. The main classes that emerged from the analysis were education and curricula, societal impact and RDI, management and staff competence, campus activities and two cross-cutting classes (e.g. comprehensiveness and setting an example). Here, cross-cutting means that after listing various ways in which UASs could promote SD, the respondent would state something like it being crucial for UASs to adopt a holistic approach by taking SD into account in all their actions, such as in their day-to-day activities.

The main contents of the classes are presented in the following section.

4. Findings: staff perceptions and ideas

The staff members' responses were categorized into six classes, according to the analysis. The last two classes were cross-cutting classes. The classes followed the key themes of sustainability in HEIs identified from previous literature and presented in Table 1.

4.1 Education and curricula

The most popular response to the aforementioned survey question was the promotion of SD through education and curricula. According to the respondents, UASs have the best

Key themes	Literature
Education, including curricula and pedagogy	Panait <i>et al.</i> (2022), Shaik <i>et al.</i> (2022); Lozano and Barreiro-Gen (2021), Hudspeth (2020); Lemos <i>et al.</i> (2018), Barth and Rieckmann (2016); Michelsen (2016)
RDI (research, development and innovation activities), including stakeholder cooperation and projects	Hudspeth (2020), Karvinen <i>et al.</i> (2017); Barth and Rieckmann (2016), Koehn and Uitto (2015); Wals (2014)
Management and staff competence	Michelsen (2016); Christie and Miller (2016); Lukman and Glavič (2007)
Campus activities, including facilities, energy, consumption	Friman <i>et al.</i> (2022), Sneesl <i>et al.</i> (2022); Ávila <i>et al.</i> (2017); Wakkee <i>et al.</i> (2019), Disterheft <i>et al.</i> (2012); Lukman and Glavič (2007)
Comprehensiveness	Lemos <i>et al.</i> (2018), Michelse (2016); Lozano <i>et al.</i> (2013), Disterheft <i>et al.</i> (2012); Lukman and Glavič (2007)
Setting an example	Michelsen (2016)
Source: Authors' own creation	

Table 1 Key themes of sustainability in HEIs, according to previous literature

opportunities to promote SD and a sense of responsibility for it in their curricula and learning content. The typical answer was that sustainability education should be integrated into all curricula in all study fields or disciplines. The best way to promote SD through education was said to be to educate experts who are familiar with the principles of SD and know how to apply them in their own work. It was also mentioned that curricula and course implementation plans must be based on sustainability thinking and that learning assessment must also consider SD competence.

4.2 Societal impact and research, development and innovation

Besides education, the societal impact of HEIs can be seen in their partnerships, such as in their RDI projects, theses and internships. Staff at UASs wish to see UASs as forerunners and as good examples of SD-related issues. The responses to the aforementioned survey question highlighted the important role of RDI activities. RDI activities must promote SD and responsibility and must be integrated into studies. Many respondents expressed a strong desire for UASs to have a visible role in regional cooperation, both with companies in RDI projects and as members of the local community. The importance of communicating the lessons learned and operations that have been completed and those that are still in progress was cited. Moreover, it was frequently mentioned in responses to the survey that UASs could be more active debaters in newspapers and events, especially on the local and regional levels.

4.3 Management and staff competence

Several respondents stated that commitment to SD should be clearly expressed in UASs' strategies and should be reflected in UASs' values and in the willingness of management to promote SD. According to many respondents, an SD promotion strategy must be implemented on a practical level, while SD questions should be considered in decision-making and in all management actions. Through the management system, SD topics need to be made visible, and basic studies on SD need to be made available in all degree programs. Evaluation of the progress of SD actions (e.g. via curriculum implementation) and measuring instruments were also called for.

Staff training was mentioned as the most important first step in SD activities. The staff at UASs need to be given SD education so that they are able to teach their students to promote SD throughout the UAS community. Based on the responses, training and competence development needs vary by work task. Regarding teaching tasks, the need to deepen knowledge-related competences was often mentioned. In RDI, development needs were more often linked to the operating environment of the research field. Many respondents expressed the need for basic tools and instructional materials that they could apply to their own work.

4.4 Campus activities

The suggestions connected to campus activities were divided into four clusters: consumption, recycling, food and transportation. The answers contained propositions about how learning institutions could push their staff members and students toward more sustainable behaviors. The ideas presented varied from simple daily practices to the implementation of overall improvements in distance working and learning environments. The responses were strongly linked to the ideas of alignment, involvement and credibility. Without a decent level of SD operations in organizations, the other manifestations and documents in the organizations (e.g. curricula) would be "empty." Ideas about green energy, solar panels and water-saving systems were brought up. Closely linked proposals about better recycling systems and preferring vegetarian and vegan food alternatives were given, and concerns regarding food wastage were raised.

The survey was carried out in spring 2021, by which time the worst of the COVID-19 pandemic was over and the practices of distance working and learning had been broadly learned and put to use. As expected, traditional practices in relation to transportation were questioned in the responses. For instance, the respondents proposed that online meetings continue to be held in place of face-to-face meetings, especially those with foreign partners. In addition, problems regarding work-home travel were mentioned, and electric cars, bike rental, building more recharging stations and lessening car parking spaces were proposed as practical solutions. In the suggestions regarding how to improve student well-being through campus activities, the sociocultural dimensions of the SDGs were mentioned.

4.5 Comprehensiveness

The first cross-cutting theme seen in the survey responses was that SD promotion should be made part of all UAS activities. Some respondents outlined only educational actions, but others did not make a distinction between educational actions and other actions in this respect. The commonly cited manifestation of sustainability and a sense of responsibility for it in UASs (Arene, 2020) was a bridging of the gap between UASs in terms of efforts to reach SD targets. The willingness to collaborate and share was strong. Internal communications were mentioned as an important tool for cooperation, transdisciplinarity and transparency. The role of communication in changing the attitudes of people in UASs toward SD and the adoption of a more SD-oriented organizational climate were mentioned in relation to education, RDI and campus operations. It was also said that communication could raise individual SD awareness, which could help overcome the barriers to successful SD promotion.

4.6 Setting an example

As the second cross-cutting theme, a remarkable number of responses emphasized the view that UASs should set an example in promoting SD. The views were related not only to teaching but also to other issues, such as cooperation with other organizations. Leading by example was seen as a significant part of being a responsible societal actor and forerunner in the region in which one works. The respondents considered Finnish UASs to be consistent in setting an example, as they "talked the talk and walked the walk" instead of teaching one thing and doing another. Moreover, it was pointed out that a good start for both individuals and UASs is with their own actions.

4.7 Summary

Based on the analysis, the emphasis is on the importance of integrating SD into education and curricula, the role of RDI and societal impact, the significance of management commitment and staff competence, the potential of campus activities, the need for comprehensive SD promotion and, finally, the importance of setting an example.

5. Conclusions and practical implications

The key findings of the study are the need to integrate SD into UASs' strategies and action plans, the crucial role of staff members in redesigning education toward sustainability, and the importance of RDI activities and campus operations in promoting SD. These results are aligned with the results of previous studies concerning the education and RDI activities of HEIs. UASs' staff play a crucial role in redesigning education toward sustainability, and they are in need of support and further training in this regard. Previous studies (Konst and Scheinin, 2018; Mulà *et al.*, 2017) have shown that a training program can act as a trigger for a much-needed change in the climate and in people's attitudes, especially in the teaching profession. The staff at UASs also need a place where they can meet with

each other, discuss relevant challenges and share ideas. They need support and encouragement to be able to make significant progress.

Advancing SD through RDI activities was seen in this study as an essential and practical way for UASs to develop new sustainable solutions together with businesses, other organizations and local actors, conforming to the ideas of Barth and others (2014) about the cooperative-oriented university. In addition, the regional and working-life-related profiles of UASes are aligned with this profile. Concerning RDI activities and comprehensiveness, the trans- and multidisciplinary proposals agree with the definitions of the SD-oriented approach to research, which is described as dynamic and holistic instead of a conventional static and reductionist approach. Sharp dividing lines between basic and applied research can no longer be drawn, and previously separate fields or disciplines have formed a continuum in an effort to solve wicked problems (Richardson and Erdelen, 2021).

UASs play an important role in linking the ideas of comprehensiveness and setting an example, which can be seen as characteristic of education-focused organizations (Lemos, 2018). UASs are setting an example by integrating SD into all their activities, including education, research, campus operations and external communication. Besides visible steps, invisible social practices signal commitment to SD targets. The survey respondents in the present study emphasized that the physical environment at the campuses has to follow SD principles and be supportive of the efforts of education and research. Setting an example that lends credibility to other SD actions has often been seen as the first step in SD promotion (Karvinen *et al.*, 2017; Friman *et al.*, 2022). It is also a prerequisite for external communication in SD and for avoiding greenwashing (Khatri and Ahuja Sharma, 2011).

The systemic nature of sustainability issues requires a deep understanding of SD topics and their interdependencies. This usually requires time, inclusive management and plenty of collaboration, such as encouraging open discussion and providing opportunities for sharing ideas and best practices (Konst and Scheinin, 2018; Mulà *et al.*, 2017). A comprehensive and holistic SD approach emphasizes the importance of shared language and concepts (Djorcjevic and Cotton, 2011). Programs for the promotion of SD and a sense of responsibility for it need to be continually evaluated and renewed in an increasingly holistic and ethical direction (Holm *et al.*, 2015; Lozano *et al.*, 2013). To have a real impact on SD, all UAS activities and operations must be infused with SD matters so that SD becomes the "Golden Thread" (Lozano *et al.*, 2013) throughout the organization.

Based on the enthusiastic welcome of SD programs by Finnish UASs, the staff members at these institutions seem to have the will and motivation to take up the challenge that SDs have set. In the survey responses, education is seen as the most effective tool for promoting SD. Ensuring that all students obtain the knowledge, skills and motivation needed to foster SD and most significantly increase UASs' impact on SD in society. The commitment of UASs to promoting sustainability through their own programs is a major help in reforming higher education so that it fosters a sustainable future.

Overall, the activities of UAS staff suggested that the number of other ideas presented for promoting SD in HEIs is encouraging. This reported process of collecting staff members' opinions and ideas has been a design of institutional sensemaking (Vuori, 2015). The shared vocabulary, concepts and understanding have been constructed as the first step of UASs' national SD process. Together with further progress and management support, UASs can play an important role in future sustainability work. Behavioral science research has provided a wide range of evidence for how an active minority can cause the majority's behavior to change (Holm *et al.*, 2015). When the concepts of foresight and SD are brought together, a clear synergy can be observed between them. Both can bring people together in a social process to elaborate on their experiences, use their expertise, enable mutual learning and come up with a common language with which to define a shared vision and set of objectives, all of which can contribute significantly to the realization of a sustainable future.

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