HOW NATIONAL CO-OPERATION CAN SUPPORT HIGHER EDUCATION INSTITUTIONS IN SUSTAINABLE DEVELOPMENT – CASE FINLAND

T. Konst

Turku University of Applied Sciences (FINLAND)

Abstract

In Finland, there is strong national level collaboration among higher education institutions (HEIs)in sustainable development. Joint sustainable development goals were set for all the universities of applied sciences (UASes) in Finland already in 2020. These goals have been further developed in continuous national collaboration that each UAS can utilize and adapt to their own policies and activities.

This paper presents how national collaboration in sustainable development among higher education institutions in Finland takes place especially in the four thematic areas: education and training; research, development and innovation (RDI); management and competent personnel; and carbon footprint. Additionally, it introduces Turku University of Applied Sciences as a case example describing the practical implementation of the national level sustainability guidelines and solutions into the HEI's daily operations. Experiences and good practices are shared along with challenges and research needs for the future.

Keywords: Sustainable development, higher education, national co-operation, sustainability.

1 INTRODUCTION AND BACKROUND

In Finland, there is strong national level collaboration among higher education institutions (HEIs)in sustainable development (SD). A number of factors have led to this situation. Growing importance of sustainable development globally, as well as international and national policies, such as EU's Green Deal, Framework for Green Competences [1] and Sustainable Development Guidelines of the Finnish Ministry of Education and Culture [2] have contributed to the development. The Ministry has also implemented the Sustainable Growth Programme for Higher Education [3], which has produced policies in cooperation between the Rectors' Conference of Universities of Applied Sciences (Arene), the Rectors' Council of Finnish Universities (Unifi) and various other ministries. Additionally, expectations of industries and businesses have acted as drivers in HEIs' work to promote sustainability, and on institutional level factors such as strategic intentions and staff and student expectations have played an important role too.

However, maybe the most significant milestone was that joint sustainable development goals were set for all the universities of applied sciences (UASes) in Finland already in 2020. Then, a joint programme for the sustainable development and responsibility of UASes was published [4]. This programme provided a common reference framework, and it was approved by all 24 UASes in Finland. The goal of the programme was to reduce the UASes' footprint and to increase their positive impact, the handprint, in the development of society. All Finnish UASes promised to reduce their footprint so that they will be carbon neutral by 2030, and some of them even earlier.

The joint programme was published by Arene, Rectors' Conference of Universities of Applied Sciences. At the same time, the national collaboration in the Arene network started, an expert group for sustainability and responsibility was established, and four subgroups were set up in the following thematic areas: SD in education and training, SD in research, development and innovation (RDI), SD in management and competent personnel, and carbon footprint measurement. The members of the groups participate in the work on a voluntary basis, and there are representatives from all universities of applied sciences in these groups. The meetings take place online, which has made it possible for all UASes to participate. The subgroups make annual work plans, and the work is monitored by a committee that was established to ensure the impact of the subgroups' work. The work of subgroups is based on shared learning: good practices and experiences are shared, not only between subgroups

but nationally with the UAS community by organizing regular webinars and producing guidelines and publications.

These goals of the joint sustainability and responsibility programme have been further developed in continuous national collaboration that each UAS can utilize and adapt to their own policies and activities. In this paper, it is presented further how this national co-operation among UASes in sustainable development has progressed, and given examples of practical implementation of the national level sustainability guidelines and solutions into daily operations of one higher education institution in Finland, Turku University of Applied Sciences (TUAS).

2 METHODOLOGY

The research methodology in this paper is based on action research, participatory observation and on a case study. The research data is gathered from existing literature, various research documents and national and international guidelines and policies, as well as from the SD development process a) taken place in national co-operation in Arene's SD expert group and its subgroups, and b) as a case study in one Finnish university of applied sciences, Turku University of Applied Sciences.

3 RESULTS IN NATIONAL CO-OPERATION

The joint SD work started in 2020 was evaluated in 2023 to see how UASes had progressed with the promises and measures defined in the joint sustainability and responsibility programme. The aim of the evaluation was to gain information of the progress of the programme at each UAS in the four thematic areas, to get information on the achievement of the goals and give directions and recommendations for further SD work. The results of the evaluation were inspiring because the collaboration showed its strengths. The promises listed in the programme had been kept, the activities had progressed, and the development trend was strongly upward. The contribution of the evaluation process produced also the final report covering recommendations and development proposals for joint follow-up work at UASes. [5]

In education, many universities of applied sciences have already introduced sustainable development expertise into their curricula or degree competence objectives or are currently in the process of doing so. If redesigning/ renewing curricula, sustainability and responsibility seem to be part of the reform. A join challenge in many UASes is that there are usually differences between study fields and programmes inside each UAS. A systematic approach to ensure competence in sustainable development in all education and training programmes is one of the development goals of several universities of applied sciences, as is the monitoring and evaluation of implementations and competences. In a few universities of applied sciences, monitoring and evaluation are already in place and part of the quality system, and sharing good practices about these is seen as a fruitful new objective for achieving the common target level of universities of applied sciences. However, there is still work ahead for everyone. The challenge of the work is affected by, among other things, the fact that the curricula are subject to many pressures for change in addition to sustainable development and responsibility. All in all, as far as education is concerned, all universities of applied sciences have taken steps to make sustainable development and responsibility part of their education, but there is development work to be done.

In RDI activities, there are more differences in sustainability and responsibility work between universities of applied sciences. The majority reported that development needs are mainly focused on guidelines and/or evaluation and follow-up of RDI activities. Since universities of applied sciences seem to be at quite different stages in terms of sustainability and responsibility of RDI activities, it was mentioned that learning from others, cooperation and common guidelines were useful.

Concerning management and competent personnel, sustainability management is seen as the most accurate part of the operations of the entire educational organization and as part of current processes, not as a separate function. The introduction of indicators was highlighted as important in the development of operations. Comprehensive concrete measures for the entire personnel indicate commitment, such as attention to sustainability during staff orientation, development discussions and competence development.

Carbon footprint has been calculated in universities of applied sciences for years, the calculation principles has been continuously refined and measures have been taken to reduce the footprint. It is likely that the joint programme has served as an incentive for universities of applied sciences, because all universities of applied sciences are committed to the goal of carbon neutrality. Monitoring the carbon footprint and reducing it are concrete measures that have been used to promote sustainability work. However, the goals of universities of applied sciences to prevent biodiversity loss have not been mentioned in the joint programme. As the carbon neutrality target approaches, more emphasis is needed to increase the carbon handprint and to monitor its growth.

In all, one of the main findings during the joint SD work was that the challenges of promoting sustainable development and responsibility are very similar in all UASes. Indicators and evaluation tools are needed, or current tools need improvements, e.g. for monitoring not only the (carbon) footprint but also the handprint. Monitoring the handprint means for example how to verify the effectiveness of education to strengthen students' competences and motivation to promote sustainability, or impact of RDI activities to increase the ability of the UAS partners, i.e. companies and businesses, to promote sustainable development in their own operations and in their products and services. As a result of national co-operation and the evaluation process, UASes have set higher targets in their sustainability and responsibility work to be achieved in coming years.

4 RESULTS OF NATIONAL CO-OPERATION AT TURKU UNIVERSITY OF APPLIED SCIENCES

Turku University of Applied Sciences is a multidisciplinary educational community consisting of over 12 000 students and 800 staff members. The university is located in Southwest Finland, but it operates globally especially in various research and development activities. The university offers bachelor's and master's degree programs in the field of engineering, business, arts, health care and social sciences.

Sustainable development and responsibility are at the core of TUAS strategy. The sustainability work is guided by TUAS own sustainable development and responsibility programme [6]. Its first version was published in 2021, following the contents and structure of the joint programme published by Arene. Both programmes as well the whole sustainability and responsibility work of all Finnish universities of applied sciences are guided by Agenda 2030 [7] and the Sustainable Development Guidelines of the Finnish Ministry of Education and Culture [2]. TUAS works actively with its stakeholders and in various networks to promote sustainability. For example, TUAS is actively involved in the City of Turku's climate programme [8] and signed Turku Climate City Commitment.

TUAS has actively participated into the work of Arene's SD expert group and its subgroups. TUAS has representatives in these groups, which have worked on the regular basis from year 2020. Since the Arene model for work organizing SD work has proved successful, the same model has been applied to TUAS' own SD activities as well. Earlier TUAS had a steering group in SD but sharing and dissemination of information proved ineffective. It was also difficult to create commitment to SD work inside TUAS community. In early 2023, the SD work was reorganized according to Arene's model. Four subgroups were established: SD in education and training, SD in RDI, SD in management and competent personnel, and Indicators and footprint measurement. There groups prepare annual roadmaps, guided by TUAS own SD programme, implement them, and report to TUAS executive board

This SD working model at TUAS is now based on shared leadership, which shifts the focus from a person or their work position to the process and is used where there is a need for collaboration and influence across organizational or professional boundaries [9]. The groups are formed around the key processes their groups represent, e.g. head of RDI is responsible for the SD in RDI group, while the education and training subgroup is led by the head of pedagogical development. This model ensures that the results of the work and needed changes are led into operating models that permeate the entire organization. TUAS sustainability coordinator supports the expert group leaders, coordinates the internal collaboration, organizes the communication activities and enhances the cooperation with stakeholders.

In Table 1. it is described how national collaboration in SD work is organized and how this model is adapted locally in the case example, Turku University of Applied Sciences.

Table 1. National collaboration in SD work and its local implementation (case TUAS).

National level	Higher education institution (HEI) level, Case: Turku UAS
Rectors' Conference of Finnish Universities of Applied Sciences Arene	**Turku UAS**
SD and Responsibility Programme for UASes [4]	Turku UAS SD and Responsibility Programme [6]
National Arene led committee in SD	**Turku UAS Executive Board**
National expert team coordinators (RDI; Management and competent personnel; Education and Training; Carbon footprint)	Turku UAS Coordinator in SD
Rector responsible for SD work	Turku UAS Rector
Representatives of Arene vice rectors for education, vice rectors for RDI	Turku UAS Vice Rector for Education and Research, Deans, Director of Finance and Administration; Director of Services
National Arene directed SD expert teams	**Turku UAS Expert teams in SD and responsibility work**
RDI	RDI, led by Turku UAS RDI Manager
Management and competent personnel	Management and competent personnel, led by Turku UAS HR Manager
Education and training	Education and training, led by Turku UAS Deans and Head of Pedagogical Development
Campus activities and carbon footprint	Indicators and footprint measurement, led by Turku UAS Special Advisor on Quality

5 CONCLUSIONS

The national cooperation in SD work between UASes has been close and fruitful. The work has progressed as planned and sustainable development has progressed in all UASes' activities. For example, the carbon footprint calculation at UASes has been completed according to joint calculation principles for several years already, and the calculation methods are available for all HEIs [10]. Measurement principles and tools for the handprint of HEIs are currently being worked on. Best practices to bring SD in education and training have been shared and SD has been integrated in teaching and learning in an increasing number of UASes. Staff training in SD is implemented in most UASes, and RDI, a sustainable and responsible RDI is defined and criteria for sustainable RDI projects have been drawn up together. These actions have taken place also at TUAS.

New members have continuously become involved in the work of the Arene's national working groups. This shows that the work is perceived as productive, and it provides several benefits for each participating UAS. Additionally, when monitoring the work of Arene's subgroups it has been found out that participation into SD work also brings new meaning and motivation to the work of UASes' staff members. At TUAS, organizing SD work according to Arene's model, by linking it to the basic processes of the organization instead of a separate steering group, has committed a much wider group of actors and thus also increased the impact of the SD work..

The national collaboration has supported UASes to take national guidelines to a more practical level in the daily operations of participating UASes, where internal collaboration and engagement of staff are essential in the implementation of the promised actions. Sharing good practices across the expert groups have helped in reaching objectives. However, there are still many challenges ahead. For example, increasing SD education by a few credits is not enough to make sustainable development a reality. Students need to be given practical skills to use SD in their future profession, and a mere description of SD in the curriculum does not yet guarantee the learning of those skills. Similarly, real implementation of sustainability in RDI projects is difficult to assess, when the funding body defines evaluation criteria of the project. Evaluation of HEIs' handprint especially concerning the impact of SD in education and RDI will also need a lot of collaboration and research work now and in the future.

In all, renewing higher education towards real sustainability requires not only time but changes in teaching and learning, structures, processes and practices [11], [12]. HEIs need to integrate sustainability work in their strategic decision-making, management commitment and practical everyday actions. In practice this means that sustainability is linked to all the activities of the organization and is also regularly evaluated. In Finland, HEIs have started national collaboration in SD work, which will hopefully lead to a significant handprint on society in the future, as there is enormous potential especially through education and RDI activities. Overall, higher education can play a significant role in society as a promoter of sustainable development. If higher education does not act as change agent, then who will?

REFERENCES

[1] European Commission. *GreenComp: the European sustainability competence framework*, 2022. https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en

[2] Ministry of Education and Culture*. Sustainable development policy in the administrative sector of the Ministry of Education and Culture*, 2020. https://okm.fi/en/-/ministerio-linjasi-kestavan-kehityksen-tavoitteet-omalle-hallinnonalalle

[3] Ministry of Education and Culture. *Sustainable Growth Programme for Higher Education in Finland*, 2021. https://okm.fi/en/project?tunnus=OKM049:00/2021

[4] Arene. Sustainable, responsible and carbon-neutral universities of applied sciences. *Programme for the sustainable development and responsibility of universities of applied sciences*, 2020. https://www.arene.fi/wp-content/uploads/Raportit/2020/Sustainable%2C%20responsible%20and%20carbon-neutral%20universities%20of%20applied%20sciences.pdf?_t=1606145574

[5] T. Konst, M. Friman, K. Häkkinen, J. Tolkki. Kestävä, vastuullinen ja hiilineutraali ammattikorkeakoulu. *Ammattikorkeakoulujen kestävän kehityksen ja vastuullisuuden ohjelman (Arene ry 24.11.2020) väliarviointi*, 2023. https://www.arene.fi/wp-content/uploads/Raportit/2023/Kest%C3%A4v%C3%A4%2C%20vastuullinen%20ja%20hiilineutraali%20AMK%20v%C3%A4liarviointi%202023.pdf?_t=1679863577

[6] Turku University of Applied Sciences*. The Programme for Sustainable development and Responsibility of Turku University of Applied Sciences*, 2024. https://www.turkuamk.fi/media/filer_public/07/70/0770f9b9-e5f0-44ec-b141-eeb760f2eec3/sustainable_and_responsible_turku_uas_eng.pdf

[7] United Nations. Agenda 2030, 2015. https://sdgs.un.org/2030agenda

[8] City of Turku. *Turku Climate Plan 2029* - updated. Issuu 2022. https://issuu.com/turunviestinta/docs/turku_climate_plan_2029

[9] R. Bolden, S. Jones, H. Davis, P. Gentle. . Developing and sustaining shared leadership in higher education, 2015. *Leadership Foundation Higher Education*. http://hdl.handle.net/11343/55439

[10] J. Kääriä, A. Laitinen, S. Jänkälä. Arenen hiilijalanjälkilaskuri. *Arene 2021*. https://arene.fi/julkaisut/muut/arenen-hiilijalanjalkilaskuri/

[11] L. Kairisto-Mertanen, T. Konst. *Redesigning education - Visions and practices*. Oppimateriaaleja 130. Turku: Turun ammattikorkeakoulu; 2020. https://www.theseus.fi/handle/10024/341894

[12] LV Ávila, W. Leal Filho, L. Brandli, CJ Macgregor, P. Molthan-Hill, PG Özuyar et al. Barriers to innovation and sustainability at universities around the world. *Journal of Cleaner Production* 2017;164. https://doi.org/10.1016/j.jclepro.2017.07.025