UNIVERSITY OF GOTHENBURG

GOTHENBURG CENTRE FOR SUSTAINABLE DEVELOPMENT

BASE LINE STUDY on

The Integration of Sustainable Development into Education at the University of Gothenburg

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Executive Summary

To further enhance Education for Sustainable Development (ESD) efforts, UNESCO has recently launched The Berlin Declaration[1] which officially introduces the new framework, 'Education for Sustainable Development: Towards achieving the SDGs', ESD for 2030[2]. Highlighting education as a key enabler for the successful achievement of the Sustainable Development Goals (SDGs), this framework has called for urgent action in the remaining less than 10 years to 2030 to accelerate ESD efforts across all levels of education. Being an important knowledge creation sector, higher education plays a key, indeed pivotal, role in the realisation of sustainable development.

Since sustainable development was introduced in the Swedish Education Act 2006, the University of Gothenburg has been striving to integrate sustainability and sustainable development into education. The Gothenburg Centre for Sustainable Development (GMV) has served as a driving force towards the same endeavour. This report summarises a baseline study conducted in the autumn of 2020, presenting the university's earlier achievements, prevailing challenges, and existing opportunities regarding the integration of sustainability into education. As key findings, the report highlights six major thematic challenges: controversies, doubts, and scepticism within ESD; compartmentalisation of disciplines; curricular challenges; pedagogical challenges; challenges related to governance and the difficulty of changing mindsets. Recommended options and possible solutions are discussed. Suggested ideas for future actions and implementation strategies are presented in GMV's action plan for 2022-2024. The action plan is being prepared parallel with writing this report.

[1] https://en.unesco.org/sites/default/files/esdfor2030-berlin-declaration-en.pdf

[2] https://unesdoc.unesco.org/ark:/48223/pf0000370215

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1. Introduction and Background

As we are left with less than ten years to achieve the global Agenda 2030 for sustainable development, the endeavour to reorient higher education towards sustainable development is ever more pressing and urgent. Education is widely acknowledged as an integral mechanism to help people live a “sustainable” life. Higher education is expected to play a central role in engaging with the sustainability agenda not only through its teaching and knowledge production but also through critical perspective that actively and constantly deal with changing the current status quo in society. There needs to be a sense of urgency and reorientation. As Holm & Martinsen (2015) argue, for today’s higher education to play its role, transformation needs to occur across all disciplines.

The goal of transforming and reorienting education towards sustainable development was pursued globally in connection with the UN Decade of Education for Sustainable Development (DESD), 2005-2014. Last decade, the Global Action Programme (GAP) 2014–2019 was introduced to accelerate and scale-up Education for Sustainable Development (ESD) endeavours towards the latest decade’s Sustainable Development Goals in Agenda 2030. More recently, to respond to the increasing interest across higher education to engage with the sustainable development goals (SDGs), the notion of ESDGs (Education for the SDGs) was introduced encompassing a broader and more comprehensive focus beyond the already existing ESD endeavours (SDSN, 2020).

1.1. Integrating Sustainable Development at the University of Gothenburg

Driven by the introduction of sustainable development in the Swedish Higher Education Act in 2006, the University of Gothenburg has been striving to strengthen its profile in terms of embracing sustainability and sustainable development in its educational and operational activities. The Swedish Higher Education Act states, *“In the course of their operations, higher education institutions shall promote sustainable development to*

assure for present and future generations a sound and healthy environment, economic and social welfare, and justice" (Chapter 1, § 5)

In line with this, the university has been striving to integrate sustainability into the curricula by emphasizing the need to increase and assure the quality of integrating sustainable development into courses and study programmes. As highlighted in the recent national evaluation by the Swedish Higher Education Authority (UKÄ, 2018), both University of Gothenburg and Chalmers University of Technology are among the 11 higher education institutions with well-developed processes for incorporating sustainable development in education. Despite this positive outcome in the evaluation, there are a variety of practices across different faculties and departments at the University of Gothenburg. While some faculties succeeded in the process of incorporating sustainable development into education, others are still lagging behind (Finnveden et.al, 2020).

The Gothenburg Centre for Sustainable Development (GMV), which is jointly run by the University of Gothenburg and Chalmers University of Technology, has been playing a pivotal role in facilitating and generating knowledge about sustainable development and its integration into education. Some of the initiatives by the centre include: the course labelling approach (Boman and Andersson, 2013), the use of ESD toolbox, the Gothenburg University Sustainability Thesis Award (GUSTA) project[3] and hosting a series of ESD forums[4] and workshops for various faculties within the two universities. While much has been achieved through these activities, there is more work to be done towards the transformation for effective and systematic integration of sustainability and sustainable development into education.

To this end, it is pertinent to ask: what are the prevailing challenges, gaps and needs in the effort to integrate sustainable development in education? What are the possible solutions towards creating an improved space and systematically integrate sustainability and sustainable development into education across disciplines at the University of Gothenburg? What kind of shifts in perspective are required to

[3] https://gmv.chalmers.gu.se/student-hub/gusta+award

[4] https://gmv.gu.se/english/student/forum-for-sustainable-development-in-higher-education-

successfully reorient higher education curriculum and pedagogy toward sustainable development?

2. Objectives

Drawing on empirical data, this small-scale base line study was intended to:

- identify current challenges, gaps and needs to improve integration of sustainable development into education at the University of Gothenburg.
- suggest practical, pedagogical, administrative, and institutional strategies which pave the way to improved reorientation of education towards sustainable development at the University of Gothenburg.

3. Method and Approach to Analysis

At the University of Gothenburg, we have different actors at different levels of the organization who are already engaged with the endeavour to integrate sustainable development into education. These actors include: ESD researchers, course leaders, faculty representatives for ESD, sustainability coordinators, environmental coordinators, student coordinator at GMV and SDSN North Europe coordinator at GMV. From these actors, twenty people have contributed as respondents for the baseline study. Data was collected through a questionnaire, Appendix I.

While analysing the questionnaire data, a thematic analysis method has been employed. As defined by Braun and Clarke (2006), thematic analysis is "*a method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set" (p.79*). Emerging themes from the data are thus presented and analysed using Braun and Clarke's (2006) six steps which include: familiarizing oneself with the data, identifying preliminary codes, searching for emerging themes, reviewing potential themes, defining and naming themes and producing the report. The findings related to identifying the challenges faced during the effort to integrate Sustainable Development into higher education and the identified needs are summarized in six different themes.

4. Findings and Analysis

Enormous and diverse challenges were identified by the respondents. The challenges identified include: scepticism, doubts and lack of clear understanding on what ESD entails; problems attributed to disciplinary boundaries and the difficulty in transitioning to multidisciplinary practices; challenges related to curriculum; pedagogical dilemmas; challenges attributed to higher education governance/leadership and lack of “clarity” on the role of education for sustainable development; and challenges pertaining to changing mindsets. Drawing on the ideas from the respondents, each challenge is described and discussed as a theme, including a description of respondents’ ideas followed by the author’s discussion/ analysis and interpretation of each theme. Following a discussion of the identified themes a set of possible solutions is discussed while the actions and strategies are presented in the separate action plan document.

4.1. Controversies, Doubts and Scepticism within ESD

Sustainable Development is both a by now comparatively old and continually evolving field. However, as pointed out by one of the respondents, there is sometimes a tendency to perceive the notion of sustainable development as an existing resource that all faculties can draw on. However, it should be noted that the problems of sustainable development, though they have been around for long, are wicked, slippery, complex, and dynamic. The sustainability challenges are context sensitive and evolve over time. What is sustainable in one context may not be so in another context or time. In line with this, Martin and Murray (2011) indicated that that sustainability is a consequently a challenging problem which makes it difficult to communicate and control its characteristic values and attributes which in turn makes it difficult to have a definite working guideline. For instance, few decades ago climate change was not as such posed as an existential issue, but recently it is criticality becoming more and more obvious. Some even believe that the time is rapidly becoming overdue to take serious action, that it has become the biggest threat to humanity. Earlier, as highlighted in the

millennium development goals[5], there had been greater focus on issues such as poverty and inequality.

Due to the dynamic nature of sustainability challenges, we are uncertain which global problem we face in the near future. For that, as pointed out by the respondent, we need a knowledge and evidence-based approach which entails that we should not see sustainability knowledge as an existing good that faculties and schools can draw on, but rather a shift to think about the latest knowledge and how it works. The aforementioned respondent suggest that higher education staff need a cultural shift from reaching for recipes and ready-made remedies for sustainability challenges towards a dynamic approach of learning how to "stay with the trouble" and remain vigilant as the knowledge base we have is continually changing. It is this inherently wicked and complex nature of sustainability problems and the prevailing contestation over the evidence base approach that contributed to the difficulty in achieving cultural shift in contemporary higher educations (Adams et.al, 2018; Whitmarsh, 2011).

To a certain extent, the aforementioned deep-rooted challenges seem to contribute to scepticism around 'buy in' and commitment to the idea of Sustainable Development, which leads to doubt the role that individual teacher and their field of studies could broadly contribute for sustainable development. As stated by another respondent:

> *"my personal interest in ESD is the interdisciplinarity of the area, and think all teachers have a responsibility to engage with these issues. But many don't, either because they see it as someone else's responsibility/area of expertise or are not confident of their capacity to contribute. Many people, including academics of all persuasions, are not aware that ESD is conceived as a broadening out of education for 'people, planet and prosperity', rather that this is education only about the environment. Education for the SDGs further clarifies that multifaceted nature of this type of education for the future".*

Other respondents raise what Van Poeck and Vandenabeele (2012) refer as practical concerns and ask questions pertaining to whether we really know what is sustainable. These respondents underline the uncertainty, provisional, and contested nature of the knowledge within sustainability education. They also posed democratic concerns (Van

[5] https://www.un.org/millenniumgoals/

Poeck and Östman, 2020) and ask "who decides what is sustainable/desirable?" In doing so, these respondents pointed out that education might unintentionally become an instrument and fall into the risk of indoctrinating certain values, exclusion of groups, lack of pluralism and freedom in the teaching-learning process. One of the aforementioned respondents also raised pedagogical concerns and asked *"what education is supposed to achieve, and wonder if education is bearing the risk of reducing itself to an instrument for achieving externally determined goals".*

Holding on to the idea of education as a vehicle for sustainable development, two other respondents raised further concern in relation to the very role of higher education for sustainable development. One of the two respondents highlighted that:

> *"the role of education for sustainability should not be taken for granted, but rather to be questioned". This respondent argued that "education must not simply be seen as an uncritical "machine" designed to communicate and implement some kind of apolitical notion of sustainable development, and hence this must be taken into account if sustainable development is to be "integrated" into education. Education should not simply be about "implementing" the SDGs but also critically consider the different contradictions that are built into the entire SDGs framework".*

Hence, this calls for the need to consider the political dimension of sustainable development and acknowledge that difficult political trade-offs between different goals and indicators might be needed.

Taking a different point of view, another respondent pointed out that:

> *"the fundamental role of higher education is to preserve the unsustainable status quo, which makes radical change and transformation extremely difficult to achieve"*

The respondent cited a case wherein the Vice Chancellor of University of Gothenburg rejected the suggestion to implement a university wide vegetarian policy in 2018. According to this respondent, developing ESD becomes a bit paradoxical when the university itself is not willing to take the action needed to create a sustainable campus. This respondent argued for the need for an action plan and manifesto for instigating concrete change and suggested a university wide vegan policy as an example of an action to start with.

Another aspect of practical challenge, pointed out by another respondent, is the global nature of the SDGs and the difficulty to make clear and direct connection to local context. This has added to the scepticism to buy the idea and commit to it. As argued by this respondent, *"there is not enough body of knowledge on how these global goals can be localized in the curriculum in a meaningful manner".*

4.2. Disciplinary Boundaries and the Tensions they Create

Another recurring challenge in higher education, identified by most of respondents, is some lecturers' difficulty in thinking beyond their discipline to see the relevance and applicability of their field to the complex notion of sustainable development. As one of the respondents puts it:

> *"The fact that University of Gothenburg is a diverse institute, and that each faculty is somewhat self-governing makes the reorientation endeavour hard as it requires respect for diverse disciplines. The tension within disciplines inevitably leads to questions of interdisciplinarity, transdisciplinary, system thinking and boundary crossing approaches which brings about pedagogical challenges. Particularly, making such transformation is a huge challenge in institutions where disciplinary silos and identities are very strong"*

The respondents stressed that these issues should be discussed on a central strategic level in the university as well as on faculty level. At a strategic level, the university needs to offer more opportunities for students to meet and discuss in a cross-disciplinary setting; stimulate discussion, collaboration, and action for sustainability. For instance, regardless of the subject one teaches at a particular higher education institution, one should be able to see the link of that subject with all the 17 SDG goals. If making this link appears to be impossible, it should be taken as a challenge for continued improvement in one's own teaching towards sustainability.

While arguing for the need of systemic development in higher education, Giesenbauer, and Müller-Christ (2020) indicated that "…*universities should open up to internal and external stakeholders and thus, embrace interconnected and open environments…. which can help to keep up with societal change and to deal with increasing complexity, gradually leaving professional silos behind and allowing co-creative problem solving and collaboration to occur*" (p.20).

4.3. Challenges with Rethinking the Curriculum

As far as curriculum is concerned, various challenges and tensions are highlighted by the respondents. One of the respondents underlined:

> *"the fossilised and subtle unsustainable assumptions of the higher education curriculum status quo remain resilient to change. We need … transformative curriculum ideas that lead to changing behaviour and action. The ill-defined beliefs and assumptions we have in ESD often leads to a simple and surface level change of curriculum. Fragmented modifications do not bring about the required transformative change in the learning outcomes of our students".*

Such a fractured approach to curriculum changes delays decisive action from being undertaken and thus able to succeed in building the required future-oriented competences and skills in our students (Rieckmann, 2012). A few respondents also highlighted how the 21 century uniquely demands a radical transformation of curriculum to bring about a change in the way we and our students think, which will eventually change the way we and our students act.

Another respondent looked at the tension from a different perspective and reflected on issues pertaining to the "what to teach" aspect of sustainability and the burden it creates on teachers while reworking course content. There has been discussion and debate on if ESD is a call for an add-on to existing crowded curriculum or rather calling for optimizing/rethinking of the already existing content approach or perhaps a combination of both. While highlighting curricula as a critical and core transformative element in higher education, Shephard (2015) argued that the taken for granted and hegemonic assumptions embedded within higher education curricula require a complete bottom-up revitalization-not just cosmetic and surface level changes.

4.4. Pedagogical Challenges

4.4.1. Inability to confront and change hegemonic pedagogical approaches

It was highlighted by some respondents that today's problem is a result of the way the current generation has been educated. One respondent, in particular, highlighted that:

> *"higher education has been more of a problem than a solution by failing to confront the hegemonic unsustainable assumptions embedded in*

> *today's pedagogy. Even if we are aware of the assumptions and the kind of competences and skills needed to lead us to sustainability, we do not have the pedagogical mechanism to deliver them into practice for citizens. We need pedagogical approaches that disrupt the classical transmissive approach and seek for a mechanism that leads to students' experiential, active engagement with concrete problems in the real world. We should know the type of learning and the associated process that allow for emerging pedagogical practices that have the potential energy for teachers to confront old and accumulated structural tensions within higher education, which hopefully goes beyond the surface and brings about a change in the way the learners think".*

Parallel with this challenge of altering pedagogy, what is also emphasised by another respondent is the lack of a good process to assess sustainability competences. This respondent indicated that:

> *"Sometimes, even if there are efforts to incorporate ESD elements into curriculum and pedagogy, teachers tend to default to classical approaches (e.g., essay writing) when it comes to assessing sustainability skills and competences".*

So, teaching and assessment should be viewed hand in hand, which is not always the case within ESD practices.

4.4.2. Weaving the SDGs into curriculum/pedagogy versus teaching about the SDGs per se

Two respondents indicated there is a general belief that addressing the SDGs pedagogically is equated with teaching topics pertinent to the SDGs (such as climate change, biodiversity, or economic inequality…etc.). The latter pedagogical approach mainly emphasises developing literacy and knowledge around these topics. However, it should be noted that the SDGS are time bound and outcome targeted, and hence proper teaching and engagement with the SDGs calls for a shift from theoretical and abstract thinking, which is often referred as sustainability literacy, to thinking about pragmatic applications and implementations of concrete strategies that lead to meaningful engagement to the goals and their achievement. Particularly, it is important to highlight applications in today's precarious time (such as COVID 19 global pandemic) which brings about uncertainty by altering and disrupting our path and engagement with the SDGs. Dealing with such pedagogical implementation barriers requires us to rethink various aspects including governance and priorities in budget

allocations. Thus, higher education institutions need to facilitate its governance in such a way that there is a conducive and flexible environment and the pedagogical mechanism that links literacy (knowledge acquisition) to pertinent actions/practices.

While emphasizing such misconceptions, scholars such as Mulà et.al. (2017) pointed out that: *"the focus of ESD is, therefore, in pedagogy, as it seeks not just to "teach about" sustainable development and transmit expert knowledge in this area but also to equip people to respond to the complexities and uncertainties of the future" (p.799).*

4.4.3. Difficulty in transitioning from specific subject mastery to encapsulating and engaging with complexity

Another challenge of pedagogical nature highlighted by some of the respondents is that it is not uncommon to see respective faculties and programs dwelling on the mastery of specific topic pertaining to their respective specializations. For instance, as one of the respondents indicated:

> *"the school of public health has been teaching about pandemic and communicable diseases for a long time and the school of environmental studies has been teaching about climate change and loss of biodiversity. Likewise, the school of economics has been addressing issues pertaining to inequality, poverty…etc."*

The respondent argued that these global issues do not deviate from what education for sustainable development and the SDGs are addressing but unless the links are explicitly explored, they could be seen as distinct and disconnected.

Hence there is a need for ESD and the ESDGs to challenge higher education programs outside their comfort zones so they do not remain comfortable within their respective disciplines but proceed to repurpose specific subject knowledge mastery towards global concerns of sustainability. The fundamental principles of ESD and the SDGs call for a transition towards addressing these issues as complex and intertwined- not as separate and discrete subject knowledges. Viewed from the SDGs perspective, this creates an immediate tension as it does not permit the option of mastering specific niches or topics. In turn, this leads into a pedagogical dilemma: how to allow students the time, energy and focus to delve into particular subjects of their choice while at the same time making sure that they do not lose the understanding of the full breadth of issues that the SDGs capture?

Highlighting the pedagogical dilemma, Mulà et.al. (2017) state that: *"there are still large "translation gaps" in applying an ESD pedagogy to different subjects so that it reaches across the whole course of study, rather than simply introducing specialist knowledge of sustainability in certain places." (p.800).*

4.5. Challenges in Higher Education Governance

It has been argued that "higher education plays a decisive role in promoting sustainable development (SD) by integrating sustainability as a cross-cutting principle in teaching, research, operations, and knowledge transfer" (Bauer et.al.,2021). However, higher education governance has not always permitted this. Some of the respondents highlighted a lack of top-down direction to integrate sustainable development into education. In doing so, they emphasised the necessity for vice-chancellors and deans champion it and ensure the integration of sustainability into curricula, recruitment, promotion, research funding and other similar aspects. Absence of such direction, as indicated by the respondents, brings about a lack of university wide mission and reluctance to engage with it. These findings urgently pose questions such as: how can university management seriously champion this to facilitate an environment so that teachers and researchers are supported to work on integrating sustainability issues into their subject matters?

4.6. The Challenge of Changing Mindsets

As argued by one of the respondents, the aspect of "changing mindsets" towards ESD is treated somewhat naively. Highlighting his experience and hope, this respondent argues that:

> *"most teachers in higher education can agree on that students need to learn/develop relevant knowledge and skills in relation to SD and the SDGs. However, talking about changing mindsets without problematization is likely to create a lot of friction in academia. First, it seems to imply that some people (proponents of ESD) have the "correct" mindsets, and the problem is "only" to make others realize this, which is rather a biased position to take. Second, the views in academia are very diverse regarding the legitimacy to intentionally try to change mindsets among students in a particular direction. One could adopt the position that the task is to develop knowledge and skills and then it is up to the students when it comes to mindsets-*

> *whatever view we personally have on this, acting naively will certainly create problems".*

The respondent suggested that it would be better to focus on knowledge and skills, together with open and reflective discussions instead of political implications and changing mindsets. It is wiser to encourage diversity and accept different views and actions than dictating to alter mindsets.

Table 1 below summarizes the challenges.

Misconceptions, Concerns and Doubts/Controversies • Role of higher education • Value based versus prescriptive approach • Teachers' freedom and expectation for commitment • Hope and despair • Scepticism, reluctance, lack of interest • Changing Mindset-persuasion towards the ”right” mindset	**Disciplinary Boundaries** • academic silos resulting in lack of communication and collaboration across disciplines • interdisciplinary approach • transdisciplinary approach
Curricular Challenges • the “what to teach aspect”: burden on reworking course content • Add-on to existing crowded curriculum versus the optimizing/the rethinking of existing content approach	**Pedagogical Dilemmas** • Mastery of specific subject versus engaging with complexity • Teaching about the SDGs versus teaching the SDGs per se
Higher Education Governance • Allocation of funding and incentives • Criteria for recruitment and promotion • Lack of time compensation for ESD efforts	**Changing Mindsets** • Bias and normativity • Multiplicity of views and how to entertain them

Table 1. Summary of identified challenges.

5. Discussion of suggested educational/pedagogical and administrative actions

The suggestions forwarded by the respondents, together with the author's elaborated interpretation, are summarised and discussed under three headings: creating synergy among key actors across University of Gothenburg; the need for competence and professional development around ESD curriculum and pedagogy; and facilitating ESD engagement through leadership and governance.

5.1. Creating Synergy Among Key Actors Across Gothenburg University

For strengthened synergy and cooperation among relevant actors (students, lecturers, researchers, departments, faculties, and leadership staff), some respondents highlighted the need to utilise various existing networks and also the formation of additional active and vibrant networks committed to ESD*.* As highlighted by these respondents what is missing mostly is information and internal communication among different existing actors across disciplines and relevant educational activities across the university. The respondents pointed out that some staff are doing interesting research related to the SDGs and ESD questions, but they do not have the platform to put them to use and to match their work with others across faculties and departments. Teachers in various disciplines need to get information about, and get in touch with, relevant lecturers/researchers working with sustainability. Currently the available platform (GMV) does not fulfill all these needs, and hence an expanded formation of interdisciplinary think tank/ sustainability task force is suggested.

Particularly, today's somewhat rigid higher institutions' structure necessitates the need to reorient higher education governance in such a way that it opens up a room for collaboration and disruption of academic silos both for research and teaching. Hence, the University of Gothenburg should strive for a renaissance education, traversing disciplinary boundaries and strengthen. Some of the already existing cross-curricula initiatives (e.g. the University of Gothenburg Centres for Global Societal Challenges) and also facilitate the expansion and formation of new university wide inter and

transdisciplinary research groups and teams. This will, in turn, pave the way for new and innovative knowledge production, which is much needed to address challenges pertaining to sustainable development. Formation of such a synergy and network also facilitates more direct ways of approaching people with information and resources. E.g. department visits, collaboration with different networks, and facilitating information sharing platforms.

A possible platform as suggested by one of the respondents, is the formation of a specific responsible unit using technology in a smart and differentiated manner. The approach suggested by this respondent was:

> *"to set up a virtual sustainable development faculty by utilizing centres such as GMV as the platform and have one committee responsible for allocating funding to teaching and another one to research. This would break the hegemony of traditional faculties in allocation of funds to interdisciplinary teaching and research. Staff would be recruited to have a double affiliation to a standard department and the virtual faculty".*

While highlighting the practice at NYU in New York as an example, the respondent indicated that the committees would have a "broker" role to ensure that the teaching and research are continuously updated to meet the needs of society and that the needed capacity is recruited. This recruited capacity would have an instrumental role as change agents in their departments bringing in new courses, and research projects.

5.2. Competence and Professional Development around Curriculum and Pedagogy

In this regard, various suggestions have been outlined by respondents which includes possibilities for training and continuous professional ESD development pertaining to curriculum and pedagogy and how to maximize and utilise students' initiatives.

It has been repeatedly highlighted by the respondents that there is a need to further revise curricula and develop teaching staff's pedagogical capacity in relation to sustainable development. Some respondents highlighted that many staff have domain expertise but do not have enough knowledge on how to integrate sustainability in a pedagogic way, and hence need hands-on support regarding the integration of sustainable development. This calls for the availability of support for teachers and

course leaders and workshops at faculty level, think tanks …etc. to a bigger extent than what is available today. As a result, this needs to span over a longer period and engage a wider teacher audience. It has been pointed out by the respondents that professional development could be done via a central skills development program. One respondent pointed out that:

> *"right now, different actors are doing a lot of "pulling" and not so much "pushing" with their efforts. We are trying to "pull people" towards ourselves, rather than going to them. A concrete example could be that we often tend to host events externally from the rest of the university, at our office, with our speakers etc. What would happen if we instead approached faculty meetings? Department meetings and planning days and hosted the workshop there instead?"*

These remarks are indicators for the need to have a more systematic way of engaging with continuous staff development on ESD competence. Pertaining to ESD competences, Rieckmann (2012) pointed out that systemic thinking, anticipatory thinking and critical thinking are among the key competencies that are relevant for sustainable development and hence should be developed in future-oriented higher education. Parallel with this, while sharing their experience on staff professional development, Biasutti et.al (2018) stated that an endeavour to reorient higher education curriculum towards sustainability helped them to integrate sustainability principles in to the curriculum and reflect on their teaching methods, didactical processes and engage with other meta-cognitive strategies to engage with sustainability challenges. Drawing on empirical data from 13 higher education institutions, Lozano (2021) highlighted that embracing sustainability into curricula and pedagogy requires emphasis on the process of developing competence-based teaching through innovative pedagogical approaches which in turn calls for transdisciplinary collaborations.

There is also the need to specifically focus and work on course syllabuses so that they could reflect diversity-both in terms of culture, history, and faculty. Besides, using project-based pedagogies would enable an interdisciplinary approach. In higher education where disciplines are distinct, perhaps, common projects between different subjects could be a way forward. It is also important to target and infuse ESD competences in professional education and practice (social-professional impact).

Additional pedagogical opportunities include the need to linking higher education with enterprise and professional practice (real experiences - meaningful learning), and also strive to connect and engage with local issues - universities as assistants to solutions of local sustainability challenges. Thus, there is a need to explore if our programmes of study at University of Gothenburg include these opportunities in a systematic and organized way.

To this end, one of the widely used pedagogical approach for embracing ESD is the Community Based Learning approach (Wals, 2014). This approach has been proven to localize curriculum and facilitate place-based learning which fosters local knowledge, experiential knowledge and connection with indigenous people's perspectives. This approach allows to engage with existential issues in close collaboration with a wide range of local stakeholders, which is often an excellent space for social learning which contributes for meaningful changes. These kinds of local transition niches permit to combine both scientific approaches and what is commonly referred as citizens' science (Wals, 2014). Community based learning approach also offers ample opportunity to jointly explore issues around: food, water, energy, climate, biodiversity as well as issues of fairness, inclusion, social and environmental justice. Moreover, community learning allows to utilize and take advantage of different kinds of knowledge: personal, scientific, indigenous and local forms of knowledge blending together.

While discussing problem solving approach to educational design and attributed pedagogical potentiality and risks, Poeck and Östman (2020) highlighted various pedagogical ways of engaging students with real world sustainability problems which include: engaging with the actual problem, proposing solutions, implementing the solutions and evaluating the problem solving methods. As argued by Poeck and Östman (2020), avoiding the risks and unlocking the pedagogical potentials require a conscious designing of educational practices and didactical engagements which include: having well defined goals, ensuring the manageability and authenticity of the challenges/topics being dealt with and also the need to encapsulate complexity while allowing students to engage with the whole cycle of problem solving approach to pedagogy.

It was further highlighted by the respondents that there is a huge potential in utilizing students as change agents who take initiatives to transform higher education practices both from educational, administrative, and operational point of view (Drayson and Taylor, 2015). A few respondents argue that if students are asked what they can do on voluntary basis (without making it mandatory), there is a potential that they can influence courses and other campus aspects such as procurement and cafeteria activities. Some even argue that students tend to be more radical (compared to staff) and also have more empathy than the teachers. Moreover, some respondents added that it's a good idea for staff to involve students and work together on improving courses and discuss how sustainability could be embraced in a meaningful manner. Highlighting the case of Plymouth University, Warwick (2016) emphasized students as agents for cultural transformation in leadership of sustainability.

5.3. Leadership and Governance

Respondents highlighted the need to urge the university leadership in different aspects, which include: the need to invite staff working on ESD to attend important meetings, time compensation for ESD engagements and also proper allocation of funding for creating the necessary conditions through research and pedagogical development.

As argued by some respondents, experts working on ESD should have the possibility to join meetings and influence when the education board meet at the faculty or central level. Likewise, the endeavour to integrate sustainable development into education should be systematically anchored both with the Board of Education and the various faculties. Faculties need to assign a responsible person who would have a close connection to responsible bodies taking the lead on the initiative. This structural arrangement paves the way for those who wants to take the initiative to have the necessary support and take the lead in integrating sustainable development into education.

Some of the respondents underlined time as a limiting factor for those teachers who want to integrate sustainable development perspectives into courses or programmes. Teaching is a demanding job so hence many feel that they do not have additional time

to get acquainted with and work with this endeavour, given that most teachers are fully occupied with their daily tasks, and there is really no time available to give quality work to sustainability. It is, therefore, important to ensure that those who want to do something about sustainable development, should at least get paid the time for their engagement. This will, in turn, inspire others to do more. On the other hand, the experienced ones would need to show that it does not take much time to get started initially, and we can use this as a springboard to go further. In other words, the effort to integrate sustainability into education needs to itself be sustainable. Additionally, it is highlighted that the current staff recruitment and promotion criteria should support and consider sustainable development capacity as a criterion.

A few respondents stressed that University of Gothenburg and other higher education sectors should be offered generous long-term, earmarked grants for research and pedagogical development in the area of sustainability. These respondents indicated that there should be enough funding to create the conditions facilitating the translation of research into educational practice. There has to be the capacity to experiment and innovate in education so as to develop pedagogical models beyond mere “green labelling” of courses that risks only creating surface not systematic change. Some respondents also indicated that all students who have a bachelor's degree should have the opportunity within their main area to not only know something a little random about sustainability issues but actually be able to engage and contribute to sustainable development. Drawing on the data from the respondents, the allocation of funds and incentives within the university system (all the way from the government to the department) does not seem to support the necessary transformation of education towards sustainable development.

In an effort towards a transformative governance, scholars such as Bauer et.al. (2021) highlighted the importance of the whole institution approach that integrates research, teaching, knowledge transfer, students’ engagement and other relevant stakeholders. In parallel, towards achieving the required transformation, Robinson and Laycock Pedersen (2021), argued for the need to repurpose universities by reorienting education, research, campus, and outreach activities towards sustainability. As they pointed out, this inevitably calls for disrupting the hegemonic, subtle and resilient

unsustainable assumptions embedded in the governance structures and processes of higher education system.

6. Concluding Remark and Way Forward

To improve the conditions for sustainability, the University of Gothenburg needs to continue working towards embedding the principles of sustainability at various levels including: institutional leadership/sustainability governance, departmental engagement and initiatives, lecturer driven activities and support of those (pedagogy and curriculum in particular), explicit focus on the students and campus operations. The university must be dedicated to continuing strengthening existing groups and networks, but also needs to create a new overarching strong inter- and transdisciplinary network for education. Such networks should have delegates that include deputy department heads for education, head of faculty administrators and sustainability coordinators from each faculty and department as well as student representatives and those beyond the university too. The envisioned network is hoped to serve as a platform to facilitate co-learning and collaboration with different stakeholders from academia (students, academic staff, administrative/technical staff, GMV and top leadership) and possibly sectors beyond academia.

As far as curriculum and pedagogy are concerned, there is an urgent need for a series of staff training and pedagogical development actions focused on ESD. This involves transforming the curriculum and pedagogy status quo to change the way the lecturers and students think, teach/learn and consequently act. Drawing on the argument by Shephard (2015), GMV and the aforementioned pertinent actors should strive towards real transformative culture change-not just a tinkering approach of adding bits and pieces of ESD contents here or there. GMV should also collaborate with other key actors (e.g., University of Gothenburg's Unit for Pedagogical Development and Interactive Learning-PIL) and facilitate for pedagogical engagement with sustainable development and also ensuring that curricula across faculties reflect the competences, skills and values required for the 21st century.

Parallel with the curricula and pedagogy, accompanying assessment modalities need transformation. The way we teach, the forms of learning that we cultivate and the assessment modalities we employ have to be in line with the complexity that our world requires. ESD pedagogies should facilitate co-creating of knowledge with stakeholders and allow possibilities for creatively and reflexively engaging with the urgent life-threatening problems of our world.

Moreover, it has been observed over the years that students are often enthusiastic harbingers for change and transformation. Hence, GMV should work towards facilitating and expanding students' participation and contribution for the integration of sustainability into education. Students should be empowered to have their voice heard and make decision makers (such as university chancellors and also politicians outside the academic sector) accountable to them and the wider democratic community. Here, hiring more student sustainability coordinators at GMV is a first step forward.

As far as governance and leadership is concerned, the university needs to make sustainability an overarching principle that permeates through all tasks at GU. To this end, GMV needs to ensure that the strategic management of the university prioritises sustainability as an essential core element for the whole university. Additionally, it is necessary to adopt stringent university wide sustainability guidelines across the university. GMV could also suggest and argue for the appointment of presidential advisor on sustainability.

Drawing on this baseline study and report as a backdrop, GMV has identified potential areas to be focused in the upcoming years. These include: institutional leadership/sustainability governance at the central level, departmental engagement and initiatives, lecturer driven activities and support (pedagogy and curriculum in particular), explicit focus on the students and campus operations. Details and priority plans can be seen on the separate action plan document.

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Appendix I: Questionnaire

Dear respondent,

The Gothenburg Centre for Sustainable Development (GMV) is working towards scaling up the work of integrating of Sustainable Development and the SDGs into education. We would like to have your view of such an integration.

At the moment, we are aiming to prepare an action plan towards a more systematic integration of sustainable development (SD) into programmes and courses across the University of Gothenburg in 2022-2024. At University of Gothenburg, we have many actors on different levels of the organization who are already engaged with the endeavour of working with sustainable development in education. The aim of the action plan is for GMV to facilitate/accelerate this process by designing a plan for a more systematic integration and to identify and support synergy options among these already existing initiatives. As you have been part of this endeavour on different occasions, we happily invite you to share your ideas and insights as we strive to create an action plan for 2022-2024. There is a need to systematically integration of SD into education into the university's structure instead of continuing with ad hoc events, which we have been doing the past few years.

We are also inspired by SDSN's recently published a new guide on how universities could engage with the SDGs-see the link for your reference https://resources.unsdsn.org/accelerating-education-for-the-sdgs-in-universities-a-guide-for-universities-colleges-and-tertiary-and-higher-education-institutions.

1. From your experience, what are the major practical challenges and gaps in the endeavour to reorient and integrate SD into education and how can we tackle them?

2. What are your suggestions, the resources needed and possible practical solutions towards systematic integration and reorientation of education towards sustainable development at Gothenburg University?

3. The above guide from SDSN introduce the concept of “Education for the SDGs” (ESDG) as a critical enabler for SDG implementation, page 3. Please let us have your view on this, compared to the usual concept Education for Sustainable Development (ESD).