



Photo: David Lagerlöf

Rethinking Higher Education

Inspired by the Sustainable Development Goals

Conference report

30 March 2019 at Aula Medica
Karolinska Institutet Campus Solna



UNIVERSITY OF
GOTHENBURG



**Karolinska
Institutet**

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Report

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17 Goals to Transform Our World

The Sustainable Development Goals are a call for action by all countries – poor, rich and middle-income – to promote prosperity while protecting the planet. They recognise that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection.



End poverty in all its forms everywhere



Ensure availability and sustainable management of water and sanitation for all



End hunger, achieve food security and improved nutrition, and promote sustainable agriculture



Ensure access to affordable, reliable, sustainable, and modern energy for all



Ensure healthy lives and promote well-being for all at all ages



Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation



Achieve gender equality and empower all women and girls



Reduce inequality within and among countries



Make cities and human settlements inclusive, safe, resilient, and sustainable



Ensure sustainable consumption and production patterns



Take urgent action to combat climate change and its impacts



Conserve and sustainably use the oceans, seas, and marine resources for sustainable development



Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss



Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels



Strengthen the means of implementation and revitalise the global partnership for sustainable development

PREFACE

Well into the 21st century, we realise that human activity is pushing the world towards its very limits. This compels us to better understand how health and social sustainability are coupled to the climate and economy, and demands that we think and act knowledgeably, critically, and ethically across disciplines and sectors.

We must take a fresh look at higher education. The United Nations Agenda 2030, with its 17 Sustainable Development Goals (SDGs), is an excellent point of departure. These goals underscore our collective responsibility and inspire us to envision a new role for universities in achieving better health and wellbeing for all.

On Saturday, 30 March 2019, Karolinska Institutet, with the support of the University of Gothenburg, Chalmers University of Technology, and the Royal Swedish Academy of Sciences, arranged a one-day conference entitled, *Rethinking Higher Education - Inspired by the Sustainable Development Goals*.

More than 500 university students, teachers, curriculum-developers, and academic programme directors from numerous disciplines, as well as representatives from industry, labour unions, and national agencies, gathered to discuss how higher education institutions can take more responsibility for and begin to incorporate the UN Agenda 2030 Sustainable Development Goals in their curricula.

Education must be forward-looking, because the most important role of universities is to prepare our students for changes and challenges ahead. The complexity and interconnectedness of the SDGs will require not only willingness to take on pressing global challenges, but also a high level of competence among future decision- and change-makers. There is a need for increased collaboration across disciplines, between universities, and with other actors in society.

Universities need to shoulder the role as key agents of change. We need to endorse a cross-faculty approach and broaden the curricula to include components of critical-ethical analysis and systems thinking in order to formulate new solutions. Decision-makers of tomorrow cannot continue to think uncritically without a strong evidence-base, act without an understanding of the ethical context, or work in silos. This would be contrary to the holistic approach advocated by the global goals.

Another important role of universities is to organise forums for exchanging valuable practices regarding implementation of the SDGs. During the conference we discussed how educational programmes can be adapted and strong alliances forged across traditional boundaries. We highlighted the importance of higher education in transforming our world, with a focus on health - both as a goal and as a means of addressing global challenges related to people, our planet, and prosperity. We agreed on the urgency of meeting the global challenges ahead together – and that success will require cross-border, transdisciplinary collaborations. Sweden and our universities play a crucial part in achieving the Sustainable Development Goals. It will require a new way of working - and a new way of thinking - to live up to these high expectations.

We would like to thank Eva Wiberg, Vice Chancellor of the University of Gothenburg, Stefan Bengtsson, President and CEO of Chalmers University of Technology, Kerstin Sahlin, Vice President of the Royal Swedish Academy of Sciences, and the Medical Student Union in

Stockholm for their valuable contributions to the success of this conference. We would also like to thank the many students, teachers, researchers, and other professionals who contributed the valuable insights that we aimed to capture in this report.

Now it is up to us to ensure that the conference will stimulate and inspire meaningful progress in meeting the global goals. We look forward to a continuing dialogue with other universities and sectors of society on the most effective methods of incorporating the SDGs into higher education. A follow-up conference on this theme will be held in Gothenburg – hopefully one of many in the coming years. Until then, the necessary reconceptualisation of higher education and its subsequent implementation must begin now.

With these important first steps, we are on the path to taking greater responsibility for the global challenges ahead.



Photo: Erik Cronberg

*Ole Petter Ottersen
President, Karolinska Institutet*



Photo: Ulf Sirborn/Karolinska Institutet

*Carl Johan Sundberg
Conference Chair, Professor,
Karolinska Institutet*

EXECUTIVE SUMMARY

The purpose of the conference, *Rethinking Higher Education – Inspired by the Sustainable Development Goals*, was to create a dialogue around the role of higher education in achieving the Sustainable Development Goals (SDGs), with a special focus on the targets that are most closely connected to health. The main question discussed was how higher education can be designed to enable critical, ethical, and systems thinking among Sweden's next generation of healthcare leaders and professionals.

Complexity and interrelationship among the SDGs

Health is to a large extent determined by economic, commercial, political, and social factors.^{1,2} Unless we find a better balance between human needs and behaviour, the sustainability of our planet is threatened. In other words, health and sustainable development go hand in hand.

The potential synergies and trade-offs between the global goals are complex but inevitable. For example, by addressing the links between SDG1 on eradicating extreme poverty, SDG2 on ending hunger and malnutrition, SDG4 on free equitable education, and SDG6 on water and sanitation, sustainable progress can be made on child health, covered by SDG3. There are also Sustainable Development Goals that conflict - promoting development, while at the same time contributing to negative consequences, or trade-offs, with other goals.^{3,4}

The new role of higher education

Global challenges increase the urgency of changes to higher education

Inequities in health persist both within and between countries, underscoring our collective failure to share the dramatic health advances equitably. New infectious and environmental risks, at a time of rapid demographic and epidemiological transitions, threaten the health security of all.

Professional education has not kept pace with these and other related challenges due to fragmented, outdated, and static curricula. As a result, there is a mismatch of competencies to patient and population needs, poor teamwork, and weak leadership in areas needed to improve performance in health systems and related areas. This can also be explained by the so-called tribalism of the professions – the tendency of various professions to act in isolation from or even in competition with one another.

Moreover, there is an inequity in the number of medical schools around the world. While four countries have more than 150 medical schools, 36 countries have no medical schools at all. The number of medical schools do not align well with either country population size or national burden of disease.

1. See Marmot et al. CSDH (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Geneva, World Health Organization.

2. See Ottersen et al. The political origins of health inequity: prospects for change. *The Lancet*, Vol. 383, No. 9917, pp. 630-667.

3. See "Göran Tomson: Scientists can help achieve sustainable development" in *Bulletin of the World Health Organization*, Volume 96, Number 9, September 2018, pp. 589-664.

4. See Blomstedt Y et al. Partnerships for child health: capitalising on links between the sustainable development goals. *BMJ*. 2018; 360:k125.

Opportunities to make a difference

The vision of the Lancet Commission on Medical education for the 21st century, which consisted of 20 professional and academic leaders from diverse countries, was that all health professionals in all countries should be educated to mobilise knowledge and engage in critical reasoning and ethical conduct⁵. This provides them with the competence to participate in patient and population-centred health systems as members of locally responsive and globally connected teams. The ultimate purpose is to assure universal coverage of the high-quality comprehensive services that are essential to advance opportunity for health equity between countries.

Realising this vision will require *formative and transformative learning* and *interdependence* in higher education. This involves developing leadership attributes to produce enlightened change agents, and is the proposed outcome of instructional reform. Instructional reform should promote cross-disciplinary education that breaks down professional silos while enhancing collaborative and non-hierarchical relationships in effective teams.

Interdependence involves three fundamental shifts: from isolated to harmonised education and health systems, from stand-alone institutions to networks and alliances, and from inward-looking institutional work to global sharing of educational content, teaching resources and innovations. Interdependence in education is the result of institutional reforms that should expand academic centres to academic systems encompassing networks of hospitals and primary care units. They should be linked together through global networks, alliances and consortia and nurture a culture of critical inquiry.



5. See Julio Frenk, Lincoln Chen et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *The Lancet*, Vol. 376, No. 9756, pp. 1923-1958.

Recommended actions

Prioritising and implementing reforms for a more sustainable world requires a series of enabling actions from many different actors.

Below you will find a summary of the conference findings on responsibilities and actions needed from different sectors in society in order to come closer to achieving the Sustainable Development Goals.

Actor	Responsibility	Actions needed
Politicians/decision-makers	<ul style="list-style-type: none"> Improve overall equity Adopt critical, ethical and systems approaches to coping with complex and interrelated challenges 	<ul style="list-style-type: none"> Take evidence-based decisions
Corporations/companies	<ul style="list-style-type: none"> Increase environmental sustainability 	<ul style="list-style-type: none"> Reduce emissions Use new technologies
Universities	<ul style="list-style-type: none"> Educate future change agents: students, teachers and researchers Advocate for the importance of the SDGs Strengthen the links between research and education, between disciplines and between universities and society at large Convey knowledge and insights to other sectors and actors based on evaluated and measured effects of SDG actions Engage and empower students by giving them the tools and methods to become change agents Become change agents for a more sustainable world 	<ul style="list-style-type: none"> Empower and train teachers in the SDGs and how to work interprofessionally Integrate SDGs in curricula and in leadership programmes Incorporate SDG perspectives in PhD programmes Establish SDG scholarships Be role models - lead by example Create platforms for external collaboration, both physical meeting-places and social media platforms Arrange external internships for teachers Develop interdisciplinary courses and offer exchange programmes between different disciplines for both students and teachers Encourage life-long learning: create courses and learning activities for the general public Share science-based knowledge, thus creating awareness among individuals and pushing politicians to act on SDGs Advocate for the importance of Open Access Learn more about the SDGs, what they are and how students and civil society can make a difference (teachers) Engage in sustainability/SDGs both at HEIs and outside of the curriculum (students and researchers)

Actor	Responsibility	Actions needed
Funders: public, private, development aid and foundations	Promote academic projects on finding solutions to implementing the SDGs	Fund projects on SDGs Invest in health professional education
Civil society/individuals	Reduce ecological footprint	Stay informed Use critical judgement Live as you learn Educate and inform others
All actors	Collaborate across national boundaries, between disciplines, and among actors	Adopt new technologies to promote inter-professional collaboration







KEY MESSAGES FROM KEYNOTE SPEAKERS:

Rt Hon. Helen Clark, former Prime Minister of New Zealand and former Head of UNDP, and Sir Michael Marmot, Professor and Director of the Institute of Health Equity, University College London

Environmental degradation and inequity affect global health

Both Helen Clark and Michael Marmot stressed the urgency of achieving the SDGs. Environmental degradation and inequities present the most pressing challenges ahead of us.

“Continual environmental degradation will affect health. In a worst case scenario health all over the world will get worse,” said Helen Clark.

“Inequities are getting bigger. Social injustice is killing on a grand scale. To illustrate – life expectancy at birth for England’s poorest women has fallen significantly in recent years,” said Michael Marmot.

Political decisions crucial in reversing negative trend

In spite of the enormous challenges ahead of us, both keynote speakers are confident that the negative trend can be reversed, provided we act now. According to Helen Clark, the obstacles are political: “There are solutions, but we have to design policies and support vulnerable countries so that they can build sustainable development. We have 12 years to turn the negative trends around. It is possible both economically and technologically provided we implement the SDGs”.

To illustrate the crucial role of political will in achieving the SDGs, Michael Marmot referred to Costa Rica. Even though Costa Rica is a relatively

poor country with a low GDP per capita, the country invests largely in renewable energy. "It is the result of a political will to do so. They will hopefully inspire other countries to go the same way," said Michael Marmot.

Evidence-based policy and spirit of social justice needed

Other important prerequisites for achieving the SDGs are evidence-based policies and reducing poverty.

"I have two messages in a world of post-fact politics: We need evidence-based policy and a spirit of social justice. Poverty really matters. If you reduce poverty you reduce inequality," said Michael Marmot.

International solidarity will pay off

Helen Clark stressed the importance of international solidarity.

"It is not going to be enough to implement the SDGs in Sweden and New Zealand. We need global action. Every cent that we invest in international solidarity will benefit everyone," said Clark and concluded with the following words:

"Universities play an important part national, regional and local partnerships. Now that we have the concrete SDGs and their cross-disciplinary agenda, let us focus on implementation!"

Conclusions from workshops

During the conference, workshops were arranged on the following nine topics: quality of governance; inequity in health; non-communicable diseases; antibiotic resistance; pollution, climate and health; fostering action for societal change; ageing populations; mental health for all; and decent work and economic development.

While the workshops focused on different areas, there were common denominators regarding what needs to be done to achieve the SDGs:

SDGs as part of the curriculum

As the conference, focused on how the SDGs can be integrated into higher education, many workshops discussed specific strategies for including SDGs into university curricula. Universities need to:

- Educate students on what the SDGs are and what we can do to achieve them.

- Educate all students to think critically, ethically and in systems.
- Organise mandatory introductory courses in the SDGs for all students.
- Create learning outcomes related to the SDGs.
- Make SDGs part of course examinations in some degree programmes.
- Insert perspectives on the SDGs in the PhD programmes.
- Use online tools for learning about the interdisciplinary problem-solving that is required in order for us to achieve the SDGs.

Internal and external collaboration

The workshops defined two types of collaboration necessary to achieve the SDGs:

1. Collaboration/partnerships with all sectors: politicians, national agencies, industry, organisations, civil society etc.
2. Collaboration between departments and disciplines as well as between universities.

Long-term collaboration with external parties is essential in order to tackle the enormous challenges ahead of us. We need new perspectives in order to think outside the box and find sustainable solutions to complex problems. Interdisciplinary collaboration between university departments and between universities is also needed. To facilitate these collaborations, universities need incentives for transdisciplinary work.

Knowledge sharing - from higher education to politics

In order to raise awareness of the importance of sustainability, universities need to share their knowledge and scientific results by communicating in an understandable way with different target groups.

This includes:

- Providing future decision-makers and the public with scientific results so that they can make correct political assumptions and take evidence-based decisions.
- Making funders aware of the SDGs and the value of their contributions.
- Making industry interested in health preservation.

Platforms for collaborations

In order to increase awareness and work together to achieve the SDGs, we need platforms for collaboration. Universities must therefore facilitate the creation of forums for interdisciplinary interactions in which students, teachers, and researchers can find solutions to problems from a multidisciplinary perspective. The workshops also stressed the importance of knowledge and experience-sharing platforms for researchers and policy-makers. Universities can act as a bridge, connecting different stakeholders – thus paving the way for solutions to global challenges and decisions based on scientific results.

Walk the talk and lead towards change

Universities must be role models for students and make sure their actions are reflected in their values. If universities advocate leadership for sustainable development, they themselves have to act accordingly. Universities should use their networks to promote their standards both nationally and globally.

Conclusions from the two panel discussions

The conference included two panel: "Higher education curriculum change in the context of Agenda 2030" and "The role of universities in addressing global challenges".

Curriculum changes

The panellists agreed that the SDGs should be included in the curricula. Proposals included:

- One learning outcome in each university course should be related to a sustainability goal.
- Integration of SDG concepts into programmes, whether through new courses focusing entirely on sustainability or short modules added to existing courses.
- Programmes should have an action plan on how to integrate the global goals in education.
- Teachers and students should be offered introductory courses in the SDGs.

The new role of universities

Universities must undergo dramatic changes to address global challenges. One step in the right direction is to integrate the SDGs into higher education. However, universities need to transform on a larger scale. They have a responsibility not only to

convey knowledge, but also to create enthusiasm and invoke a will to change among students based on critical, ethical and systems thinking.

Cross-disciplinary collaboration is a key factor for universities to succeed in their new role: "Universities are conservative entities, but if we continue to see our disciplines as our own property, teachers will lag behind when it comes to the understanding of our existence and of our future," said Ole Petter Ottersen, President of Karolinska Institutet.

Where do we go from here?

It is important that universities continue the dialogue on the role of higher education in a sustainable world. There is also an urgency to integrate the SDGs into higher education. However, this will present a challenge as the SDGs are interrelated and complex.

Universities play an important role in passing on the torch of knowledge to the surrounding society and to our students – the agents of change. What has become abundantly clear during this conference is that students want to and should be involved in these kind of forums and in the learning process. Research has shown that engaging students increases their attention and motivates them to practice critical and ethical thinking skills. Students could also be involved in curriculum planning. If learning goals are aligned with student needs and interests, they will have a sense of ownership and feel more motivated to attain these goals.

In order for universities to attract students who want to create a more sustainable world, they need to walk the talk, be self-critical and act as role models.

Sweden is seen as a role model in the area of sustainability. It is therefore important that Swedish higher education lives up to expectations as forward-looking universities, working collaboratively across borders and disciplines.

The 2030 Agenda for Sustainable Development aims to promote the entire cluster of 17 SDGs and 169 targets. The critical-ethical analytical skills and systems-based approach referred to above are indispensable prerequisites to achieving this.

The journey towards a sustainable world will continue, and indeed accelerate. *Rethinking Higher Education - Inspired by the Sustainable Development Goals* will be followed up by a conference in Gothenburg in 2020. Collaboration is the only way forward!



MODERNISING HIGHER EDUCATION IN THE AGENDA 2030 ERA

Ole Petter Ottersen, Professor and
President of Karolinska Institutet

The President of Karolinska Institutet welcomed all participants to Aula Medica at KI and thanked the co-organisers: Gothenburg Chalmers University of Technology, and the Royal Swedish Academy of Sciences. "We have joined forces to organise this event. Many distinguished guests are here, first and foremost students from Karolinska Institutet and other universities. Did you know that as many as 100 students have travelled to KI from Gothenburg?"

So "*why are we here?*" The answer, according to Ottersen, is the the UN Agenda 2030 Sustainable Development Goals (SDGs). "These goals are not abstract, they are concrete and we have to deal with them." Ottersen highlighted three C's that mark the work we must commence: Concrete, Creative and Collaborative. "One of the most important challenges is to see how we can collaborate to achieve Agenda 2030. Collaborations between universities, political authorities, industry and civil society are needed in order to meet the global challenges ahead of us".

The Sustainable Development Goals are a collection of 17 goals and 169 targets. "At least 50 of them are related to health. For a medical university it is only natural to take a leading role on how to handle these goals."

Ottersen then went on to present the two keynote speakers, Helen Clark and Michael Marmot, saying they embody the theme of health, well-being, and sustainability. When introducing the agenda of the conference, Ottersen presented a fourth C to be discussed primarily in the afternoon workshops. It stands for Curriculum – that is: how do we integrate the SDGs into higher education?

Finally, Ottersen expressed his gratitude, thanking the organisers of the conference. "Arranging a meeting requires a high level of collaboration." The President of Karolinska Institutet also thanked all the participants, hoping they would be inspired by the Sustainable Development Goals and wishing them all a rewarding day.



PARTNERING FOR IMPACT ON SUSTAINABLE DEVELOPMENT

Rt Hon. Helen Clark, former Prime Minister of New Zealand and former Head of UNDP

Helen Clark highlighted Agenda 2030 as a bold and visionary agenda. "We do not only have to rethink higher education, but the whole way we work. It requires economy wide transformations, thinking outside the box."

Clark emphasised the important role of universities in educating and navigating students correctly in order to create a sustainable society. Universities have:

- *A teaching role:* Teachers need knowledge so that they can teach students about the SDGs. Education is important in order to build human societies and adjust to the current and future technical transformation.
- *A collaborative role:* The major strength of universities is the capacity for cross-disciplinary research and teaching. The challenge is to strengthen the links between research and education and between disciplines.
- *An evidence-based knowledge role:* Governments all around the world want to make sound decisions and are hungry for scientific evidence to support their decisions. Universities have a key role in conveying knowledge and insights to the 'outside' world.
- *A measuring and evaluating role:* The objective is to make countries commit to what they signed on for in Agenda 2030. Universities can measure the effects of different actions related to the SDGs.
- *An advocating role:* Universities have high status and are generally respected for their research and contributions to societies. Higher education institutions need to be an ongoing voice, advocating for the importance of implementing the global goals.

Helen Clark believes that environmental pollution is a threat to global health. "We have been mortgaging the future and we can't go on like this. To grow now and clean up later is not a sustainable approach. This will undermine the health gains that we have made in the last century."

Clark concluded on a more hopeful note that we can reverse the negative trend, but that requires us to act now. "However, without international solidarity, we will not succeed!"



SOCIAL JUSTICE, SUSTAINABLE DEVELOPMENT AND HEALTH EQUITY

Sir Michael Marmot, Professor and Director of the Institute of Health Equity, University College London

Michael Marmot highlighted examples of how life expectancy has fallen in traditionally rich countries such as Britain and the United States, especially among women. "Getting rich is not the way to a better society. Health is the measure of a good society."

According to Michael Marmot it is not possible to blame low-income people for their poor health, that they should eat healthy to stay healthy. "A family with children in Britain would in that case have to spend two-thirds of their income on healthy food. In other words, it is impossible for low-income people to follow dietary advice."

The Institute of Health Equity monitors health equity and the social determinants of health. Marmot presented a surprising finding in their last report. His hypothesis was that poor kids living and going to school in poor areas would perform worse in school. He was proved wrong. "The poorer areas the kids live in, the better results in school. They are doing as well in school as the average child in Britain."

Marmot asked himself why. So he investigated the matter and got the answer. *We get out of bed and tell ourselves that poverty is not our destiny!*

"The conclusion is that poor people don't want to be poor. When faced with prejudice evidence matters".

The Institute of Health Equity has identified areas in which structural changes are needed in order to achieve the Sustainable Development Goals. They include equity in political and economic structures, equity from the start, decent work, income and social protection, reducing violence, well functioning health systems and protection of human rights.

"Equity is crucial in meeting the Global Goals. One way towards greater equity is to reduce poverty and degradation. This will improve education, performance, health and income later in life. It all starts with a good childhood. Evidence-based policy and a spirit of social justice will take us far."

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WORKSHOPS

Quality of Governance

Workshop leader: Marcia Grimes, Associate Professor, Department of Political Science, University of Gothenburg

Experts: Göran Tomson, Counsellor UN Agenda 2030, President's Office, Karolinska Institutet, Co-founder and Senior Advisor, Swedish Institute for Global Health Transformation (SIGHT)

Folke Tersman, Professor, Department of Philosophy, Uppsala University, Deputy Director, Institute for Futures Studies

Student rapporteur: Calvin Besong Eta Oben

Abstract

Sustainable Development Goal 16 is related to good governance. The goal is to promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels. It identifies a number of integral components of good governance in which improvement is needed. Including the improved rule of law (16.3), increased transparency and accountability (16.6 & 16.10), responsive and inclusive decision-making (16.7), and mitigation of corruption (16.5). The first three of these targets relate to the underlying principles of political equality and equality before the law. Corruption in its various forms is one of the main factors that undermines respect for those principles, resulting in governments that serve those with means at the expense of those at the margins. Where government corruption is prevalent, progress on SDGs will be difficult, including in the area of health (SDG3).

The biggest obstacles to meeting the SDGs in general, and health-related goals in particular, are neither medical nor technical, but rather organisational and political, and attention to governance issues is therefore essential. A more thorough and empirically founded understanding of how the quality and capacity of governing arrangements in a specific setting may necessitate different types of health policy interventions will significantly enhance the likelihood of success in meeting SDG targets.

Conclusions

The workshop group concluded that Higher Education Institutions (HEIs) should seek to foster collaboration with policy makers and key stakeholders, generate scientific evidence to inform policy-makers, encourage interdisciplinary research and education, create awareness, and act as advocates for the SDGs.

The workshop group also proposed that learning outcomes related to the Sustainable Development Goals be included in the curricula for a broad range of educational programmes. There was also a call for facilitating the creation of platforms in which students and experts could engage with real life problems addressed from a multidisciplinary perspective.

Universities should take a moral stand on the importance of the SDGs, involving everyone in the process. The workshop group proposed external internships for teachers, interdisciplinary research, public outreach, online learning tools for interdisciplinary problem solving, and partnerships/collaborations with organisations and civil society.

Inequity and health

Workshop leader: Sophia Savage, Researcher, Project Manager, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet

Anna-Theresia Ekman, Educational Assistant, Department of Public Health Sciences, Karolinska Institutet, President, Swedish Society of Medicine's Student and Junior Doctor Section

Experts: Tobias Alfvén, Senior Lecturer, Department of Public Health Sciences, Karolinska Institutet, Vice Chair of The Swedish Society of Medicine

Miguel San Sebastian, Professor at the Department of Epidemiology and Global Health, Director of Studies, Umeå University

Student rapporteurs: Mona Koch Madsen and Israa Ali

Abstract

While population health in Sweden and globally is improving, social inequalities in health – health inequities – are instead persisting or increasing. That this development is seen even in countries with well-developed welfare systems (the so-called welfare paradox) signals only partial fulfilment of the ultimate goals of public health: to improve overall population health and to achieve an equitable distribution of health. The latter is one of the most relevant challenges in public health.

In the global policy arena, while the Millennium Development Goals failed to include equity, the current Sustainable Development Goals (SDGs) acknowledge that equity is central to sustainable global progress. Equity is a critical component of SDG 3 (ensure healthy lives and promote well-being for all at all ages), SDG 5 (achieve gender equality and empower all women and girls), SDG 10 (reduce inequality within and among countries), and SDG 17.18 (which calls for countries to increase the availability of data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location, and other characteristics relevant in national contexts by 2020).

Conclusions

The overall workshop conclusion was that it is important to engage teachers and all students in the Sustainable Development Goals and incorporate the SDGs into the curricula across subjects and disciplines. In addition to proposing that curricula be revised to better address the importance of inequity in achieving the Sustainable Development Goals, the workshop group also proposed compulsory SDG courses in the beginning of university programmes, SDG scholarships, and the inclusion of an SDG-related examination within certain degree programmes.

Universities must also communicate new scientific advancements in understandable ways to decision-makers, funders, and the public, and disseminate this evidence-based research in suitable forums. It is important for politicians to make informed decisions and for funders to be made aware of the Sustainable Development Goals and the value of their contributions. There is also a need for broader societal understanding of the SDGs so that they become an integrated part of people's everyday lives.

Moreover, universities have an important role to play in educating students about the Sustainable Development Goals and empowering them to serve as agents of change. Universities need to take a moral stand and talk about the SDGs in public, pushing politicians to act on them now.

Non-communicable diseases

Workshop leader: Helena Nordenstedt, Researcher, Department of Public Health Sciences, Karolinska Institutet

Experts: Lars Rydén, Senior Professor, Department of Medicine-Solna, Karolinska Institutet

Meena Daivadanam, Associate Professor, Department of Food Studies, Nutrition, and Dietetics, Uppsala University

Student rapporteur: Helena Rydberg, Student, Department of Public Health Sciences, Karolinska Institutet

Abstract

Non-communicable diseases (NCDs), including heart disease, stroke, hypertension, diabetes, kidney disease, cancers, respiratory, and liver diseases, account for 90% of deaths in the WHO European Region, and are by far the most common cause of death in all others except for the African Region. As the global population grows and ages, there will be a huge increase in the number of people suffering from non-communicable diseases already in the coming decades, and all societies need to prepare adequately for this. Four major health determinants – tobacco, poor diet, alcohol, and lack of physical activity - account for most of the chronic illness and death in Europe. All of them can be successfully addressed to prevent disease and promote health in this population, but this requires both political decisions and economic investments. Thus, information for politicians and administrators on available preventive possibilities is important, and measures to direct more financial resources towards prevention are mandatory. At present, 97% of health expenses is spent on diagnostics and treatment of illness, while only 3% is invested in prevention, including health promotion.

If the Sustainable Development Goal target 3.4, “to reduce premature mortality from NCDs by 30%”, is to be reached by 2030, and if countries are to come to grips with expanding healthcare costs, the societal approach must be to understand that health is wealth and, as a consequence, put prevention high on the agenda.

Innovative approaches and a common understanding among responsible organisations and policymakers at a supranational and national level are prerequisites for success. Political action is needed to reverse the alarming rise in chronic non-communicable diseases around the world. The evidence is overwhelming for tackling the four major risk factors for these diseases as an essential starting point for bringing about healthier populations.

Conclusions

In academia and in the healthcare professions, we know the value of prevention. However, we must properly equip the healthcare professionals of tomorrow to use this knowledge and translate it into action. Higher education can address the challenge of non-communicable diseases by teaching students how to provide politicians with evidence for making well-founded decisions and how to communicate research results to the community. More specifically, this could be done through training students and scientists to communicate what they know in an understandable way to the public. Education based on solid facts should facilitate the communication of a unified message.

The workshop group also concluded that there is a need for a more multidisciplinary training approach. One way to achieve this is to develop interdisciplinary courses and programmes and to offer exchange programmes between different disciplines for both teachers and students.

Collaboration is needed across all sectors (university, government, industry, media, and non-governmental organisations). The group proposed inter-professional courses on health promotion and healthy lifestyles. Using modern technologies to create public social media platforms for collaboration is also needed.

So what are the next steps to make this happen? First we need to incorporate the Sustainable Development Goals into the curriculum, more specifically, explain what the Sustainable Development Goals are, how individuals can contribute to achieving them, and how to empower one another to take responsibility for achieving them. This requires thorough training of teachers in the Sustainable Development Goals and inter-professional collaboration.

Antibiotic resistance

Workshop leader: Mairi Savage, Doctoral Student, Karolinska Institutet

Experts: Susanna Sternberg, Professor, Department of Biomedical Science and Veterinary Public Health, The Swedish University of Agricultural Sciences

Enrico Baraldi, Professor, Department of Engineering Sciences, Industrial Engineering & Management, Uppsala University

Student rapporteur: Weam Hamed

Abstract

The widespread use of antibiotics over the past 75 years has saved millions of lives and eased much human suffering. However, the massive use, misuse, and overuse of antibacterial drugs are making them ineffective. Certain common infections can no longer be cured and the pipeline of new antibiotics is almost dry. There is a global consensus that antimicrobial resistance (AMR) poses an enormous threat to human health. Estimates of the costs of antimicrobial resistance mention up to 700,000 deaths annually. If no action is taken, this number could reach 10 million by 2050.

Global resistance rates are increasing rapidly – and with considerable differences between countries and continents. Antibiotic consumption for human health is reported to have increased by 36 per cent globally between 2000 and 2010, yet large portions of mankind still lack access to vital antibiotics. Securing access to effective antibiotic treatment, especially in low-income countries, is as important as reducing antibiotic overuse.

Moreover, antimicrobials are used in livestock production – not only to treat sick animals, but also as preventive means to protect healthy animals or as growth-promoting tools. The global use of antibiotics in livestock is largely unknown, but the volumes are believed to exceed human use. In Europe, consumption data indicate large differences between countries. For example, the Nordic countries use very little in livestock, and in Sweden, the public health use exceeds the veterinary use. This demonstrates that animal health strategies focusing on disease prevention allow profitable production without antibiotics to compensate for poor animal husbandry. Antimicrobial resistance is a threat to animal health as well, particularly as any new drugs will most likely not be available for veterinary use. As antimicrobial resistance is a global One Health⁶ issue, it should be addressed jointly by veterinary and public health.

Concrete action is needed to deal with bacteria that develop resistance to available treatments. Diseases travel fast in a globalised world and no country can manage the challenges of antibiotic resistance alone. Some medical conditions that previously were considered minor are now life-threatening. A complex set of solutions are needed, e.g. developing new antibiotics and improving old ones, rational use, improving infection prevention and monitoring, avoiding any environmental leakage, and developing alternative treatments.

Conclusions

The workshop group concluded that we need to expand the traditional role of education and research towards a cross-disciplinary approach. Every bachelor's programme should educate students in all the SDGs, with the clear objective of teaching students how to use this knowledge. Higher education institutions must also communicate scientific results to the public and take global and local leadership by connecting different stakeholders and acting as an independent facilitator.

There is a need for an interdisciplinary curricula with joint courses, seminars, and workshops, especially among the following disciplines: political science, biomedicine, basic biology, social science, agricultural and environmental sciences, medicine, veterinary medicine and public health.

Universities should also advocate for open access to scientific results so that research findings become available free of charge for readers. Greater transparency regarding both the development and supply of antibiotics is lacking today, but is crucial for the democratisation of science and for achieving the Sustainable Development Goals. Higher education institutions can take a leading role in improving such transparency.

6. More information about One Health is available at <https://www.who.int/features/qa/one-health/en/>

The workshop group divided the next steps into actions required by individuals and universities. Individuals can educate themselves and inform others, stay informed as patients and as consumers, demand a change in curricula, be innovative, and develop solutions. Universities can encourage research and create platforms for collaboration between the many stakeholders involved in addressing the problem and find new ways of funding basic research on microbiology and antibiotics development. Reinvigorating many of the programmes that educate future antibiotic developers is badly needed, as most specialists are now retiring or entering other pharmaceutical fields without having been replaced by a new generation of experts. Universities should also include AMR in their communication strategies and engage more actively as advocates of science-based messages in various communications channels, including social media.



Pollution, climate and health

Workshop leader: Hanna Karlsson, Senior Researcher, Institute of Environmental Medicine, Karolinska Institutet

Olena Gruzieva, Assistant Professor, Institute of Environmental Medicine, Karolinska Institutet

Experts: Erik Melén, Associate Professor, Institute of Environmental Medicine, Karolinska Institutet

Maria Nilsson, Associate Professor, Department of Epidemiology and Global Health, Umeå University

Student rapporteurs: Eunice Low and Itisha Adhikari

Abstract

More than 90% of the world's children breathe toxic air every day and the climate crisis causes unacceptable health effects. In the latest edition of its Global Risks Report, the World Economic Forum ranks environmental threats at the top of the list both in terms of impact and likelihood. The report states that "of all risks, it is in relation to the environment that the world is most clearly sleepwalking into catastrophe."

Across the world current trends in climate change impacts, exposures, and vulnerabilities show unacceptably high risks for population health. Climate change may affect health directly through heatwaves, draughts, storms, and floods, but also indirectly through, for example, land use changes and water quality, among other factors. In addition, the social dynamics are affected since public health infrastructure is threatened and the consequences may lead to conflicts and migration. The situation is furthermore highly unjust since the world's richest countries are the most responsible for the climate crisis whereas the poorest countries are the ones most affected.

Leadership is needed to address the situation. As UN Secretary-General António Guterres recently said, "Every day we fail to act is a day we step a little bit closer towards a fate that none of us wants...". The list of solutions is long and includes, for example, the transition to cleaner fuels, better batteries, changes in food production and sustainable consumption, and production through improved resource efficiency and lifestyle changes.

Conclusions

The new role for higher education is to be a role model, lead by example, and motivate students. This also includes being more transparent about the environmental impact of the university as a whole.

Communication is key; universities should be the bridge between academia and different sectors in society. Universities are responsible for communicating evidence-based information to decision-makers. Higher education thus can change people's mind-set regarding pollution and climate change.

The SDGs should be integrated in all elements of education, in introductory courses, and as core components in the curriculum. Teaching about the Sustainable Development Goals should be introduced already in elementary school.

The workshop group concluded that life-long learning is important as climate change is a dynamic phenomenon. "We are all students and learn things every day. This should be reflected in all of our teaching and learning activities."

Finally, it all starts with yourself. How far are you willing to go to contribute to sustainable development? Universities can start their new role in addressing the challenges ahead by empowering and training teachers, integrating mandatory SDG-related learning objectives and sustainability targets into the curricula, arranging sustainability development activities and measuring the progress. SDG perspectives should also be incorporated into doctoral programmes.

Fostering action for societal change

Workshop leader: Maria Niemi, Assistant Professor, Coordinator for Sustainable Development at Karolinska Institutet

Walter Osika, Director, Center for Social Sustainability, Department of Neurobiology, Care Sciences and Society; Associate Professor, Department of Clinical Neuroscience, Karolinska Institutet

Experts: Anders Wijkman, Swedish opinion leader and author, Co-president, Club of Rome

Arjen Wals, Carl Bennet Guest Professor in Education for Sustainable Development, UNESCO Chair of Social Learning and Sustainable Development

Student rapporteurs: Pedro Ornelas and Noor Afif Mahmudah

Abstract

Higher education institutions have been successful in creating and advancing technologies and economic models that have accelerated the well-being of billions, but certainly not of all. These models and many of the technologies have led to increasing threats to the stability of our planet due to unsustainable resource usage. Climate change and the rapid loss of biodiversity are the most salient examples of the failure to respect planetary boundaries. The workshop explored how higher education can become more responsive, more relevant, and more responsible in light of these pressing challenges.

Our world faces ecological and social challenges, and many people feel compelled to act. But on an individual level, it is not uncommon to feel disempowered by the magnitude of these challenges. Students often enter higher education with an urge to create a better, more sustainable society, but this ambition is often obstructed. In addition to informing students about these challenges and possible responses, it is important to empower them with knowledge and equip them with tools so that they can become, or continue to be, “change agents” within a wide variety of organisations and settings.

The scientific revolution was of tremendous importance to mankind. It championed human reasoning and rational thought. It put knowledge at the centre. Furthermore, it established more nuanced and sophisticated ideals of individual freedom, economic development, and technological innovation. However, there were negative repercussions as well. The dominant idea was that every complex problem could be analysed and explained by its component parts, while often ignoring that a system is more than a sum of its parts. For all the good brought about by the scientific revolution, we still suffer from the reductionism that was part of its construct.

The current vertical organisation of science and education is highly problematic when tackling the SDGs. These goals cannot be met by addressing them individually, as the goals calling for economic growth and development would crush those promoting environmental change. Moreover, addressing these goals requires competencies from many disciplines. What is needed is a systems approach. Hence, the challenge for higher education is to reorganise its structure with the aim of leaving today’s silos behind to generate creative innovative solutions that are systemic in nature and mindful of both people and planet Earth in all its richness.

New forms of teaching, learning, and research will be needed. Higher education must facilitate and support blended forms of learning, invite diversity and boundary-crossing, lead to structural societal change, address values and ethics and, finally, engage and empower communities of learners in the co-creation of knowledge and action.

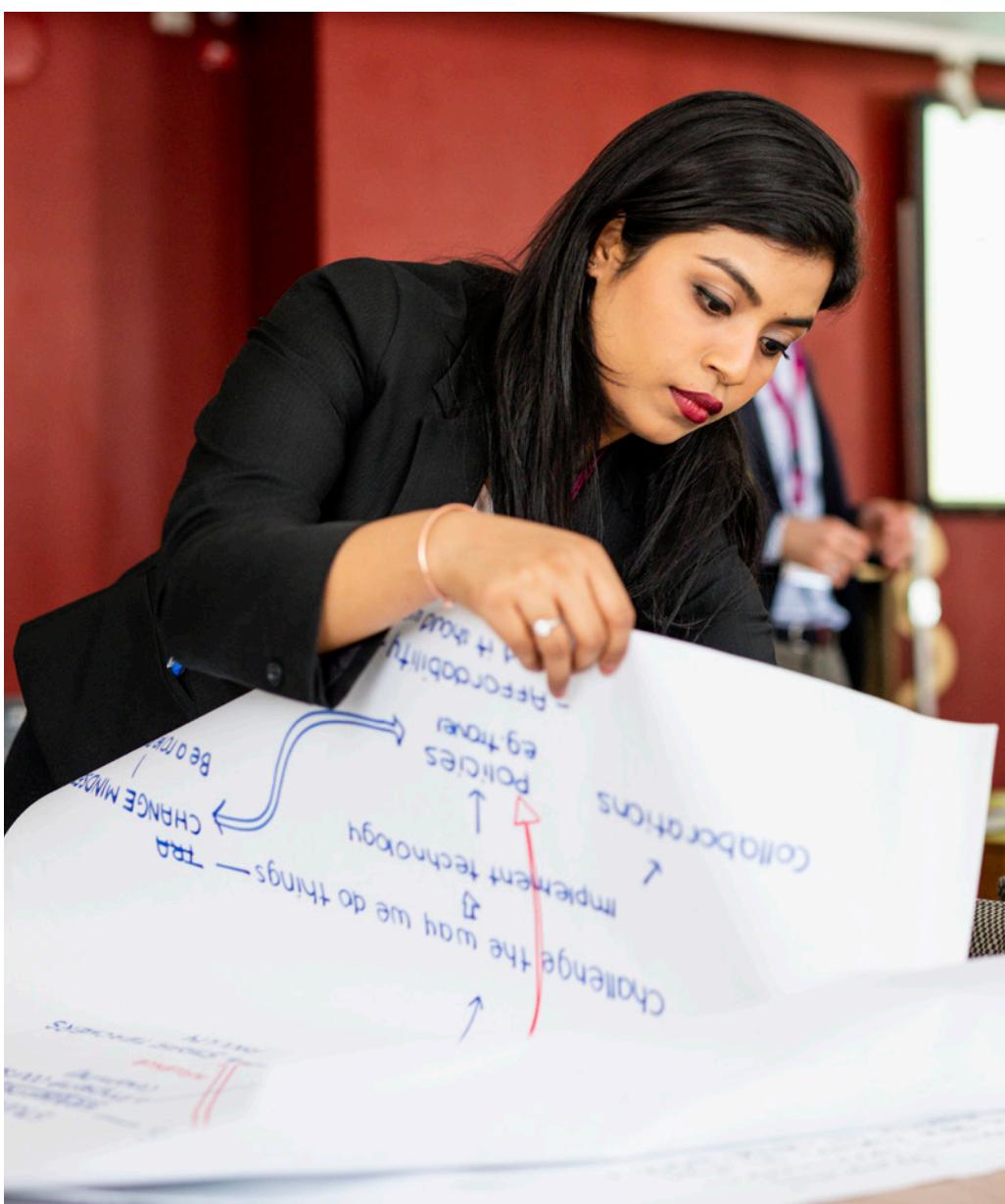
Conclusions

Higher education institutions have a vital role to play in promoting change agents and empowering communities, and should therefore prioritise research and teaching that engages communities. In addition to engaging with communities, they should also collaborate with the private sector, policymakers, civil society organisations and other decision- and change-makers while safeguarding universities’ role as guarantors of academic freedom.

In light of the significant challenges described within the SDGs, new criteria for education and research are needed. The SDGs should be required learning and integrated into university curricula from the very beginning of study programmes. But it is not enough to learn about the SDGs: students need tools and methods to act and experiment, making practical learning essential. In addition, the group concluded that incentives for transdisciplinary work within academia and with society to promote cross-boundary and transdisciplinary work should be put in place and supported through capacity-building.

Lack of knowledge about relevant issues and effective actions that can be taken are significant barriers to change. Only 10% of the global population is aware of sustainability issues, and most people in high-income countries do not know what actions to take to further the Sustainable Development Goals. It is also important to consider the most effective ways to collaborate with countries in which daily challenges related to survival and poverty trump environmental concerns.

So what steps are needed? Higher education should involve and engage students on how to meet current challenges and contribute to society right now – not only as future employees. Awareness, empowerment, understanding (both locally and globally), critical thinking, partnerships, and an ethic of care and inter-generational solidarity are required to begin making meaningful change.



Ageing populations

Workshop leader: Shireen Sindi, Postdoc, Clinical Geriatrics Department of Neurobiology, Care Sciences and Society, Karolinska Institutet

Experts: Ingmar Skoog, Professor, Director, Centre for Ageing and Health, AgeCap, University of Gothenburg

Miia Kivipelto, Professor, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet

Student rapporteur: Sunhee Kim

Abstract

Population ageing and the increase of ageing-related conditions create medical, societal, and economic challenges. Longer life expectancy will increase the demand for both primary health care and long-term care. Moreover, it will challenge society at large to invest in making our built environments more accessible and age-friendly.

Our collective goal should be for everyone to experience healthy ageing. But despite large gains in health over the past few decades, healthy ageing remains extremely uneven. Our current healthcare systems are often better designed to deal with individual acute health conditions than with the more complex and chronic health needs that tend to arise as we age. Furthermore, inequities in health among older adults are often a consequence of advantage and disadvantage across people's lives.

Well-informed policy responses are needed to overcome, rather than reinforce, these inequities. In order to promote healthy ageing, we need to involve the whole society, work across disciplines and borders, and implement the evidence-based measures we know can lead to longer, healthier lives. The promotion of healthy and active ageing improves quality of life and offers unique opportunities for individuals and society.

Using a life course perspective, this interdisciplinary workshop discussed novel prevention strategies innovative solutions, wider societal implementation, and the role of higher education.

Conclusions

Higher education needs to increase awareness of the challenges and opportunities facing ageing societies, and disseminate research results to different sectors within society. This is crucial in order to influence policy-makers and decrease the gap between academia and decision-makers.

Universities need to revise their programmes. The workshop group proposed including ageing aspects in clearly defined learning outcomes, and creating courses and learning activities that attract the general public. This will encourage life-long learning.

According to the workshop group, actions are needed first and foremost from higher education, starting now. The proposals included everything from adopting new technologies (e-health) to promoting inter-professional collaboration in the educational system. Universities should create platforms to which representatives from different stakeholder groups could be invited before creating courses. The importance of inter-generational initiatives was also highlighted, which can optimise older adults' opportunities to contribute to education and to society at large. Partnerships with nursing homes are also important in order to exchange knowledge and experience on the challenges of ageing and the implications for the community. While the focus has often been on the challenges related to ageing societies, this workshop highlighted the unique opportunities.

Mental health for all

Workshop leader: Helena Frielingsdorf, Researcher Fellow, Department of Clinical and Experimental Medicine, Linköping University, Chair of Global Health Committee, Swedish Society of Medicine

Experts: Danuta Wasserman, Senior Professor, Head of the National Centre for Suicide Research and Prevention of Mental Ill-Health, Karolinska Institutet

Stefan Swartling Peterson, Chief of Health, UNICEF

Student rapporteur: Ying Xiong

Abstract

Today, mental health problems, especially depression, are among the leading causes of disability. Major Depressive Disorder (MDD) affects nearly 300 million people of all ages globally and is the leading cause of disability worldwide. Individuals with depression, including MDD, experience continuous suffering from a serious disease that has a significant negative impact on all aspects of life, including quality of life and function.

Suicide accounts for more than half of all violent deaths worldwide. It is a significant problem throughout the globe, with almost 800,000 people dying each year, according to official WHO statistics, and is the leading cause of death among adolescents and young adults age 15-29. For every suicide, there are at least 20 people who attempt suicide every year.

In Agenda 2030, mental and substance use disorders are specifically addressed in the Goal 3 targets including promoting mental health and well-being, strengthening the prevention and treatment of substance abuse, and achieving universal health coverage.

Mental health is a global challenge requiring global solutions using an inter-professional, interdisciplinary approach. This workshop discussed what role higher education should take in addressing mental health for all. The specific aims were to list the educational programmes that need to be revised in order to better prepare future professionals in achieving the mental health-related SDGs, and which knowledge, skills and attitudes these programmes should develop.

Conclusions

Mental health is a sensitive issue, and suicide specifically is surrounded by stigma, taboo, and feelings of shame. There exist suicide prevention methods on societal, community, and individual levels, but there are many hindrances to implementing them. In light of this, higher education needs to create awareness and change attitudes to decrease stigma and taboo.

This could be done by integrating basic education about mental health into the curriculum of all courses and programmes. Karolinska Institutet could lead by example and become a role model for a healthy university with mental health in focus, which would have a snowball effect on all sectors of society.

Another recommendation was the creation of a university-wide supervisory group responsible for integrating mental health in all programmes together with students, teachers and experts. A final conclusion was that mental health can only be achieved by involving everyone.

Decent work and economic development

Workshop leader: Anton Lager, Head of Unit, Health Status & Care Needs Analysis, Centre for Epidemiology and Community Medicine, Region Stockholm; Affiliated Researcher, Department of Public Health Sciences, Karolinska Institutet

Experts: Johannes Siegrist, Senior Professor of Work Stress Research, Heinrich-Heine University Düsseldorf
Maria Albin, Professor, Institute of Environmental Medicine, Karolinska Institutet

Student rapporteur: Jennifer Thorpe

Abstract

The SDG's agenda of "promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" contrasts sharply with the current world's labour market reality. Worldwide, almost two billion people are employed in informal work, without basic social protection. Precarious and dangerous work and high risk of long-term unemployment are frequent in low- and middle-income countries, and in some of these countries child labour and slavery are not yet under control. Labour market participation of women is still restricted in a majority of countries, along with wage discrimination.

A major aim of the proposed workshop was to discuss the main goals and contents of higher education initiatives/programmes that strengthen the knowledge and competences of decision-makers in corporations, federations, ministries, trade unions and other organisations to promote sustainable and decent work and ways of developing economic growth in accordance with environmental protection.

To summarise, decent work strengthens a healthy and flourishing life of working people. Scientific research has demonstrated this and proposed models of good practice, but action is required for their sustainable implementation. SDG 8 on decent work is a relevant goal for higher education, and all members should proactively work to this end.

Conclusions

The key messages of this workshop were the following:

- Quality of work and employment needs to be substantially improved in low- and middle-income countries.

Despite progress, in view of threats due to technological change and economic globalisation, this also holds true for high-income countries.
- Relevant knowledge, skills and competencies about how to identify and improve poor working conditions is an important aim for higher education (HE) curriculum change particularly for professional training programmes, such as medical and other health sciences students, as well as those in engineering, economics and management sciences.
- HE institutions/organisations should offer models of good practice of decent work for their employees, and they should enable students to apply these models and their underlying human values in their later professional fields of activity.
- HE institutions/organisations can also contribute to SDG 8 by searching for guarantees for decent working conditions when purchasing domestic and international services and goods.

The workshop group concluded that universities have a responsibility to raise awareness on a broad scale, provide future professionals with tools to improve working conditions in their later careers and be role models for decent work. In order to succeed, universities need to collaborate and teach with a purpose and revise the curriculum to provide skills across academic disciplines that emphasise a commitment towards decent work. Also, employers and consumers need to make sure that their actions reflect their values by implementing high working standards.

However, given the underlying trends of globalisation of technological trends, widening inequalities and increasing competition for low-skilled jobs, the situation will get worse unless decisive action is taken.



PANEL SUMMARIES

Higher education curriculum change in the context of Agenda 2030

During the first panel, participants commented on the workshop conclusions and discussed both potential changes to university curricula and the resources required to accomplishing these changes.

Reflections on the conference workshops

After the panel was introduced by moderator Carl Johan Sundberg, each panellist had the opportunity to reflect on the conference, the workshops and their conclusions.

"It is important to act now, we are already late. However I am happy to see such student engagement since they are the future change agents," said Ewa Wiberg.

"Now we need to include the SDGs in the curricula of all programmes. Universities have to show strong leadership and engage students in the importance of achieving the Global Goals. This must be a both top-down and bottom-up approach in order to generate student enthusiasm and make things happen," said Göran Finnveden.

"I am feeling like a child, growing up realising that your parents aren't the best in the world. Now I have this feeling about universities too. There is definitely room for improvement," said Sandra Alm.

"What has become clear to me during this conference is that the most important group to focus on are the teachers. Their knowledge needs to be increased through engaging learning programmes that create a will to change. We have included global health in our programmes, now it is time to integrate the SDGs. In order to facilitate change, we should encourage critical thinking in our students and emphasise the importance of collaborating to achieve the Global Goals." said Annika Östman Wernerson.

Curriculum changes needed

In order to integrate sustainability and the SDGs into university-level teaching, the panellists agreed that changes have to be made in the curricula of all programmes.

"We have to make sure that some of the learning outcomes in the curricula are related to one or more Global Goals. It is important to integrate sustainability criteria into courses, either into courses focusing entirely on sustainability or in sustainability-related courses," said Eva Wiberg.

"It is important to give students basic understanding of sustainability challenges and how to work with them within their field of training. This could be done through clear goals for all programmes that are followed-up. It is then up to programme directors how this can be done in the most efficient way," said Göran Finnveden.

Interdisciplinary collaboration

Carl Johan Sundberg asked the panellists how universities can reduce silos and foster trans-disciplinary cooperation. "We have to look at challenge-driven education as one basis for cross-disciplinary collaboration," said Göran Finnveden.

Sandra Alm expressed her disappointment in having no interdisciplinary experiences during her university education: "I have never met the students from other departments. We have no courses together." Eva Wiberg, Vice-Chancellor of the University of Gothenburg, responded "I am sorry we don't have these meeting places, but we will. We need to strengthen sustainability across faculties. An idea is to create an action group that could be of interest for both students and teachers."

The power of students

It is important that students are involved in the transformation of curricula and in developing new collaborations to better meet global challenges. "Use the power of students" was the general view of the panellists.

"There is a need for meeting places where we can have continuous discussions with students to get them involved and make them feel engaged in questions on sustainability. We want students to challenge us. For example, is it necessary to fly to the end of the world for a conference, and is it ok to serve meat in the campus restaurants?" asked Eva Wiberg.

Göran Finnveden pointed out that things change slowly. "Students are and should be impatient. We need to be quicker, but students must also be persistent." Annika Östman Wernerson agreed and emphasised that we need to welcome ideas from students and make them happen.

However, universities cannot rely on students to do the job. "Higher education institutions need to act. Our alumni surveys show that 75% encounter sustainability-related issues in their daily work. We need to prepare our students for that," said Göran Finnveden.

Sandra Alm concluded from a student perspective: "Support and utilise us! Otherwise you miss out on a large resource!"

The role of universities in addressing global challenges

During the second panel, participants reflected on what universities should deliver to society to better prepare future leaders and the workforce to achieve the Agenda 2030 Sustainable Development Goals.

Universities' responsibility

The new role of higher education places a great responsibility on universities. However, as Ole Petter Ottersen pointed out, the word *responsibility* has a negative flavour to it. That is why Karolinska Institutet decided to use the word *inspired* instead when naming the conference "Rethinking Higher Education: Inspired by the Sustainable Development Goals".

Ole Petter Ottersen asked himself why universities haven't embraced the SDGs and the 169 targets more effectively in higher education, and concluded: "We haven't been able to communicate the importance of the SDGs to researchers, teachers and students, due to the conservativeness of universities. But there is no time to wait, we have to highlight the urgency of meeting these goals. Otherwise we will never achieve health equity and better health for all!"

Kerstin Sahlin agreed, and stressed how crucial it is that higher education institutions take responsibility and communicate their role as experts on sustainability, for example, by disseminating scientific results related to the SDGs. "Universities play a very important role – we carry out research, we communicate research results, and we are home to the next generation of young scholars. University representatives have a responsibility to communicate that we play a central role in the area of sustainability."

Students will lead the way

It is important in this journey towards change in higher education to engage students, listen to them, and let them take initiatives. The panellists proposed many different ways doing this:

"We should encourage students to connect with students from other disciplines. This could be done through opening up classrooms for joint seminars. If we have joint programmes we can also learn more about the joint action that is required in achieving the Global Goals. Students should also be encouraged to engage in activities connected to the SDGs outside of school," said Kerstin Sahlin.

In line with this, said Julie Anderson, the European Union supports community engagement for students through Erasmus and has greatly increased its budget in this area.

"The role of students can be extremely important in the sustainability transition if they are given the right preconditions and space. Student should spend more time with real issues in society! They learn more, create trust between societal actors and can get more information than any other actor. They represent no one else than themselves, they threaten no one, and everyone seems to be able to relate to students and give them information. They build bridges in society and help the university to engage with society," said John Holmberg.

How to integrate the SDGs into higher education

The panel proposed a number of systemic changes needed in order for us to be better prepared to address global challenges.

"All universities should provide an introduction in the Global Goals. Since some Swedish university students only receive six or seven hours of teacher-led time, they should have the opportunity to study the SDGs during their independent work. This is what engages students, they want to work with real problems," said Kerstin Sahlin.

Julie Anderson said that the European Union already supports higher education institutions to do this. "The latest figure I have is one billion Euros allocated for projects related to sustainable development."

Ole Petter Ottersen emphasised the need for universities to put in extra curricula components on sustainability. "There is a tremendous misconception that what we are discussing is remote, but it concerns us both directly and indirectly." To illustrate this, Ottersen referred to Michael Marmot's presentation concerning how life expectancy has decreased among British women. "Progress is being reversed when it comes to health. If this is not the SDGs, then what is?"

THANK YOU

A heartfelt thanks to the many individuals who contributed to the success of “Rethinking Higher Education: Inspired by the Sustainable Development Goals” and to this conference report.

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Report

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For further reading

Many of the resources below are available throughout 2019 via the conference website: <https://www.sdgshighered.se/workshops/>

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