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Educate the educators in teaching and learning for sustainable development

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Abstract

This paper will discuss the future-ready university at the level of its future-ready teachers with regard to their teaching and learning practice for sustainable development. Academic institutions have both a role in promoting discussions of concern based on their specialized disciplines and a role in educating students to be future-ready to contribute to the society in a sustainable way. However, carrying out such roles with sufficient credibility may not be a matter of course for university teachers, who need sufficient insights into both sustainability per se and sustainable pedagogical teaching practice. This paper stresses the importance to the development of the future-ready university of cultivating sustainability, and provides an "educate the educators" project as an example.

1   Introduction

Higher education has an excessive role in society in educating students for innovative change agency and tackling the challenges around sustainable development (SD) (Levi & Rothstein, 2018). However, are university teachers ready to assist in this development? How can a university build capacity for this SD support role? Are universities future-ready in their teaching methods? Swedish universities must support SD by law. However, there have been few guiding principles from authorities concerning how to implement this law. This has resulted in significant quality variations in how universities approach the challenge of the teaching and learning mission. The student has to be future-ready to meet SD challenges, both in knowledge and in preparedness to take action. A recently published article (Finnveden et al., 2020) points out that only 38% of Swedish higher education institutions (HEI) specifically and systematically address SD and thus pedagogical approaches from a teacher competence perspective.

1.1   The future-ready university for sustainable development

According to the Swedish Higher Education Act, Chapter 1, § 5, (Swedish Council for Higher Education, 2019a) the following applies: "In its activities, the universities shall promote sustainable development which means that the present and future generations are assured of a healthy and good environment, economic and social welfare and justice." The Swedish Higher Education Authority (UKÄ) is the authority whose task it is to review the quality of Swedish higher education institutions in terms of education and research, and to follow the laws and regulations that apply to higher education institutions. In 2017 UKÄ, on the government's behalf, carried out a so-called thematic survey on how well the HEI followed the Higher Education Act on Sustainable Development (Finnveden et. al, 2020; UKÄ, 2017). The results showed a generally low degree of goal fulfillment regarding the criteria set for the

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evaluation. It is mentioned that "Three quarters of the higher education institutions do not meet the criteria set out. They are judged to need to develop their processes. Examples of such things that should be developed are to set higher education goals for SD, more systematic follow-up of these goals or a development of the work on skills development in terms of sustainable development for teachers."

A counter-criticism can be found in the fact that the Higher Education Act itself is rather poorly formulated, and the supplementary Higher Education Ordinance (Swedish Council for Higher Education, 2019b) states virtually nothing about sustainable development. It is thus very unclear how universities should address it. Counter-criticism, as it emerged at a feedback conference co-organized by UKÄ (2018-03-07), contained arguments which pointed out not only poorly formulated university law, but also the ambiguity that this law should correspond to the set of criteria as used in the evaluation of the thematic study. This counter-criticism is interesting from the perspective of the main questions in this paper regarding the readiness of university teachers and, at a higher level, the universities striving for SD. Still, at the feedback conference it was argued that the United Nations' Agenda 2030 and its 17 Sustainable Development Goals (SDGs) should constitute the framework from which the work on SD should be viewed (Agenda 2030, 2015). Kristianstad University (HKR) was one of the universities that received criticism for inadequate management regarding sustainability issues. It has since made several efforts to improve such deficiencies, with the SDGs as a main guide.

1.2   Organisational development interventions for sustainable devopment

HKR is now a member of Global Compact (United Nations Global Compact, 2020), "The world's largest corporate sustainability initiative", an organization for companies, and non-profit organizations who base their sustainability approaches on the SDGs (actually, HKR joined as early as 2016). HKR also joined the PRME Champions network during the period 2018-2019 (Högskolan Kristianstad, 2019), and the Sustainable Development Solutions Network (SDSN) in 2017 (Kristianstad University, 2018), both also based on the SDGs. While PRME is used to map how sustainability aspects are included in a business programme at HKR, SDSN has been the main inspiration source for the initiation of a Master's programme in Computer Science at HKR which especially emphasizes SD (Argento et al, 2020).

2   Intervention for future-ready academic teachers

In line with the work of Lozano-García et al (Lozano-García et al., 2008) this contribution will demonstrate a successful attempt to educate the educators and make them future-ready in their mission of teaching and learning for SD. The starting point is a course for university teachers aimed at supporting the implementation and integration of the United Nations' 17 SDGs into the curricula. Implementation also implies the use of strategic pedagogical approaches and methods that support the development of students' key competences in sustainability (Wiek, Withycombe & Redman, 2011). In line with research into how to build faculty learning communities (Natkin & Kolbe, 2016), we also illuminate the use of SD enthusiasts as teaching resources in the course, thus building both university capacity and local networks for SD.

Another development initiative for future-readiness for SD was to educate the educators. The teachers both had to learn more about SD within their own and other fields, and needed pedagogical active learning tools that supported student learning towards agency for SD. With the ambition to involve existing local competences and networks, a course design was created which involved inspirational lectures comprising good examples of how different teachers and researchers both introduce and pedagogically apply sustainability issues into different educational programmes (Persson, Melén & Einarson, 2020). This design allowed an interdisciplinary introduction of the UN's sustainable goals, contributing to widened student awareness of how to understand SD from the perspective of their own subjects. They also got inspired by active student learning approaches.

Given the connection between pedagogical approaches and the development of students' key competences in SD (Lozano, Barreiro-Gen, Lozano, & Sammalisto, 2019), the aim of the course's written exam was to transform both curricula and pedagogical implementation. Working with the curricula implied that the teachers were able to introduce more of the SDGs. The exam also involved an oral presentation concerning this implementation of learning goals in line with SD into course curricula, and the use of learning activities supporting the development of students' key competences for SD. The sharing among teachers of several pedagogical approaches to working with SD issues in the classroom resulted in yet more inspiration on how to go about developing their teaching and learning practices. This shows the importance of creating teacher networks to share experiences. The written exam also involved interdisciplinary reflections concerning the implementation of the UN goals consistent with governmental intentions (UKÄ, 2017).

3   Reflections

Although (as pointed out above) HKR has shown ambition in its purpose of working towards SD through memberships and the previously mentioned course to educate the educators, more systematic efforts are needed to, for example, develop teaching capacity to respond to the Agenda 2030 ambition. Finnveden et al. (2020) stress the need for an overall goal for SD in HEI with systematic follow-ups. However, starting by ensuring teacher competence within an interdisciplinary context is a strategic starting point that might pave the way for further interdisciplinary collaboration and networks between HEI, students and the labour market.

The course portrayed above must also be followed up concerning the integration of SD and pedagogical approaches. Things may be learned from supporting the development of students' key competences in sustainability (Wiek, Withycombe & Redman, 2011) that can be transferred into key competences needed in an overall work-life setting. Preliminary initiatives have been taken here, e.g. in the course mentioned and in working groups with educators from different disciplines (Argento et al., 2020). One conclusion, however, is that further work is needed to reach a consensus on a common view of the pedagogical approach to sustainability, and to gain the support of university management.

References

Agenda 2030 (2015). *Transforming our world: the 2030 Agenda for Sustainable Development.* Available at: https://sustainabledevelopment.un.org/post2015/transformingourworld, 2020.06.15

Argento, D., Einarson, D., Persson C., Wendin, K., & Westergren A. (2020). Integrating sustainability in higher education: A Swedish case, submitted to (state: Accepted) *International Journal of Sustainability in Higher Education*, ISSN: 1467-6370.

Finnveden, G., Friman, E., Mogren, A., Palmer, H., Sund P., Carstedt G., Lundberg, S., Robertsson, B., Rohde, H., & Svärd, L. (2020). Evaluation of integration of sustainable developmen in higher education in Sweden, *International Journal of Sustainability in Higher Education*, *21*(4), 685-698, ISSN: 1467-6370. Available at: https://www.emerald.com/insight/content/doi/10.1108/IJSHE-09-2019-0287/full/html 2020.06.23

Högskolan Kristianstad. (2019). *Årsredovisning 2018*, Kristianstad.

Kristianstad University. (2018). Sharing Information on Progress: Responsibility, Ethics and Sustainability*, PRME Report 2018*, Kristianstad.

Levi, L., & Rothstein, B. (2018). "Universities must lead on sustainable development goals", *University World News, 9*. Available at: https://www.universityworldnews.com/post.php?story=20181106131352348 2020.06.15

Lozano-García, F. J., Gándara, G., Perrni, O., Manzano, M., Elia Hernández, D., & Huisingh, D. (2008). Capacity building: a course on sustainable development to educate the educators. *International Journal of Sustainability in Higher Education*, *9*(3), 257-281.

Lozano, R., Barreiro-Gen, M., Lozano, F. J., & Sammalisto, K. (2019). Teaching sustainability in European higher education institutions: Assessing the connections between competences and pedagogical approaches. *Sustainability*, *11*(6), 1602.

Persson, C., Melén, M., & Einarson, D. (2020). Undervisning för hållbar utveckling: att stödja högskolelärares arbete med Agenda 2030. *Högre Utbildning*, *10*(1), 18-24. Available at: https://doi.org/10.23865/hu.v10.1949, in Swedish.

Swedish Council for Higher Education. (2019a). *The Swedish Higher Education Act (1992:1434).* Available at: https://www.uhr.se/en/start/laws-and-regulations/Laws-and-regulations/The-Swedish-Higher-Education-Act/ 2020.06.23

Swedish Council for Higher Education. (2019b). *The Swedish Higher Education Ordinance.* Available at: https://www.uhr.se/en/start/laws-and-regulations/Laws-and-regulations/The-Higher-Education-Ordinance/ 2020.06.23

UKÄ. (2017). *The Swedish Higher Education Authority*. Available at: https://english.uka.se/ 2020.06.15

United Nations Global Compact. (2020). *Uniting business for a better world.* Available at: https://www.unglobalcompact.org/what-is-gc 2020.06.23

Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: a reference framework for academic program development. *Sustainability Science*, *6*(2), 203-218.