Internationalizing a teaching instance: Linking Global toxicology to the SDGs

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1) Description of the teaching-/supervision session

This example focused on the revisions proposed for the course "**Global toxicology in a sustainable society**" (4TX033, 2.5 credits). The students enrolled in this course study in the second year (third semester) in the Master's Program in Toxicology. The students are diverse, often a mix from Sweden and other European countries, Asia and a few from the USA and Africa (although his can differ between the years). It is a fairly short course (2 weeks) and the different learning activities are:

1) Lectures and video lectures from SDG Academy (https://sdgacademy.org) with discussions (4 days)
2) Project assignment (2 days + 0.5 days for preparing oral presentation)
3) Oral presentation and discussion (0.5 days)
4) Own reading (2 days)
5) Written exam (1 day)

Regarding the project assignment, the students choose a topic from different suggestions or suggest a new topic and confirm this with me as course leader. There are usually around eight groups with three students in each. The task is to make a short written report describing the topic (background, exposure, health/toxicological effects) and briefly analyze and discuss the problem from a sustainable development perspective (environmental protection, economic- and social development, relation to the sustainable development goals). Furthermore, the students should make a presentation and discuss the subject with me and the other students.

Upon completion of the course, the student should be able to:
Regarding knowledge and understanding
• demonstrate understanding of the concept sustainable development and the UN sustainable development goals,
Regarding competence and skills
• identify toxicological problems in a global perspective and analyse their relations to sustainable development,

• account for international legislation and policy for chemical safety and demonstrate its importance for promoting sustainable development,

Regarding judgement and approach

• identify and evaluate social and ethical aspects related to chemical safety in a global perspective

2) Review

How international/intercultural/global is my course already in terms of both content and teaching activities? First of all - a reminder about what internationalization refers to: KI has defined internationalization (based on e.g. de Wit and others) as "the <u>intentional process</u> of integrating an international, intercultural, and/or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society". I have tried to analyze my course based on this and from the course materials, mainly hand-outs "internationalization of a teaching instance" and "Matrix of Intended Learning Outcomes". First of all, the internationalization in the course is clearly intentional (as also is obvious from the course title. <u>Internationalized content</u> of my course include "using examples and case studies from different countries and cultures, using students as resources", since I e.g. encourage students to suggest a project topic with relevance from their country (or a country where they feel as a local…). Indeed there are pros and cons with allowing the students to freely choose groups and there could be reasons for having groups with students from mixed cultures (see e.g. Carroll et al, chapter 11). The project is also an example of an <u>internationalized teaching activity</u> ("including excercises or assignment with international components, using student's own experience and knowledge to inform course content". I clearly express that this is very intentional to the students ("when you choose project remember that you decide which topics that are included in the course"). I think this is important because then the students feel even more inclusive (see e.g. "creating an inclusive learning environment", Carroll et al).

3) Developing the teaching-/supervision session

Even though my course already includes clear international/intercultural/global content and learning activities, I feel very enthusiastic about improving the course in this regard. The domain of language skills is very important and is practiced throughout the course but I mainly want to focus on the following domains and competences:

Domain 1: Global engagement with improving the international competence of forming, expressing and showing own opinion regarding societal or international topics and social involvement.

Domain 2: International disciplinary learning with improving the international competence of being able to situate his/her discipline within the international context.

Domain 3: Intercultural competence with improving cultural knowledge and communicative competence.

I plan to make these changes by changing the ILOs of the course and adding one new exercise. The ILOs will also be changed in order to better reflect the course content.

Suggested new ILOs (changes from previous highlighted in **bold**).

Regarding knowledge and understanding

- **define** the concept of sustainable development and **analyze** the UN sustainable development goals **(SDGs) by compare challenges in different countries**

Motivation and new learning activity: I think that "define and explain" is clearer compared to the previous "demonstrate understanding". Furthermore, with the addition "compare SDG challenges in different countries" I plan a new teaching activity where the student analyze challenges in their own country (or a country they are interested in) using assessment such as The SDG Index and Dashboards Report (https://www.sdgindex.org/reports/sdg-index-and-dashboards-2018/). The student next writes a reflection that will be peer-assessed by another student. By learning more about your own country as well as the country of another student the idea is that this will lead to increase international and intercultural competence as well as global engagement.

- **discuss the contribution of human activity and population size to global environmental changes such as climate change, biodiversity loss and resource depletion**

Motivation: This is something that already is included in the course but has not been reflected in the ILOs. This ILO is a suggestion from Centre for Sustainable healthcare and their work with ILOs related to this. (See document here: https://sustainablehealthcare.org.uk/priority-learning-outcomes). The critical situation considering mass extinction of species, resource depletion etc. is an "eye-opener" for many students and I think that this increases the global engagement.

Regarding competence and skills

- identify toxicological problems from a global perspective **analyzing underlying reasons** and the relation to sustainable development
- **describe** international legislations and policies for chemical safety and justify their importance for promoting sustainable development

Regarding judgement and approach

- identify and evaluate social and ethical aspects related to **toxic chemicals and pollution** from a global perspective
- **reflect on own individual consumer behavior and ways to promote sustainable lifestyles**

Motivation: My idea with the last ILO is to better promote the reflection on the student's own role and ability to act in order to make a meaningful contribution to society (as e.g. expressed in the UNESCO report "Education for Sustainable Development Goals"). This will be important in light of the international competence of forming, expressing and showing own opinion regarding international topics (with a clear link to SDG 4.7 including education for sustainable lifestyles).

Final reflection

To internationalize the whole program is clearly a job for many teachers, as expressed in the book by Carroll "incorporating an international dimension can not be the responsibility of an individual course or teacher since neither provides enough scope for action" (p. 103). One aspect that I will think about more based on this course is the language I use and how I can improve this during lecturing. I will e.g. reflect on the questions stated in Leask and Carroll (2013) quick guide (e.g. *"Do I speak too quickly? Is my pronunciation clear? Do I use too many metaphors, colloquial expressions or idioms? When lecturing, do I pause sufficiently after significant ideas to give students time to think? Do I signal clearly when I am changing topic or moving to a new section in lectures? Do I invite students to tell me if they don't understand me?").* It is so easy to forget to focus on this very important aspect – do they understand my language? I will also continue to use the SDG academy and I think this is an excellent resource that could be used by more teachers at KI (and would be great if this could be promoted). I use e.g. selected lectures from the course "Age of Sustainable Developmet" (Introduction to sustainable development, Economic growth, Planetary boundaries etc.) as well as from the course "The SDG Framework and Agenda 2030" (with lectures related to transformation challenges).

References

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