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SUSTAINABLE GASTRONOMY EDUCATION TO ACHIEVE SDGs: SUPPORTING SOFT SKILLS DEVELOPMENT AND MONITORING CHANGES IN STUDENTS' AWARENESS

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INTRODUCTION

The average temperature in Finland has been rising by 2-6 degrees in this century (Ruosteenoja *et al.*, 2016). In the context of climate change, food production is one of the major sources of greenhouse gas emissions globally. Climate warming also affects weather and water conditions negatively, but at the same time it also opens new possibilities for sustainable food business. Finland, as a responsible actor and pioneer in technology, could have a significant role globally in minimizing the effects of climate change. Finland can act as an example of a country being able to act in an economically, socially and ecologically sustainable way in food production and businesses.

The 17 Sustainable Development Goals (SDGs) came into force in January 2016 as part of the 2030 Agenda. Their aim is to trigger transformative actions across society (United Nations, 2015). All SDGs are connected to sustainable and healthy food, either directly or indirectly (Stockholm Resilience Centre, 2016): the variety of environmental impacts generated by the food system, as well as its social and economic implications, make food the most significant contributor to the transition towards a more sustainable society. Consequently, it is crucial to provide the leaders of tomorrow with the competences necessary to interact with various stakeholders of the food system and to act beyond individual disciplines towards an increased overall sustainability. Wesselink *et al.* (2015) identified such 'soft skills' and competences as systems thinking, embracing diversity and interdisciplinarity, interpersonal competence, action competence and strategic management.

Previous research (Allievi *et al.*, 2018) has highlighted how experiential approaches to teaching and learning can play a pivotal role in providing students with such soft skills, required also for a better handling of the complexities of food systems. Fitting within this scope, education for an increased level of global citizenship also becomes relevant within the context of the Sustainable Gastronomy curriculum. Global citizenship is defined as

a sense of belonging to a broader community and common humanity. It emphasizes political, economic, social and cultural interdependency and interconnectedness between the local, the national and the global. (UNESCO, 2014)

Launched in 2012 together with the UN Secretary-General's Global Education First Initiative, global citizenship is also one of the UN's top three education priorities. Its core dimensions are cognitive, socio-emotional and behavioural (UNESCO, 2015). Within the first characteristic, the acquisition of knowledge, understanding and critical thinking about global, regional, national and local issues is identified, together with the interconnectedness and interdependency of different countries and populations. The sense of belonging to a common humanity, sharing values and responsibilities, empathy, solidarity and respect for differences and diversity is linked with the socio-emotional dimension. Finally, the behavioural aspect includes education to act effectively and responsibly at local, national and global levels for a more peaceful and sustainable world.

When including global citizenship into sustainable gastronomy education, the aim is thus to build the knowledge, skills, values and attitudes necessary for students to be able to contribute to a world with increased peace and inclusiveness. In order for this to be successful, a wide stakeholder buy-in, feedback from monitoring and evaluation processes and collaboration with the local communities should be included in the process (UNESCO, 2015). Here and in previous research (Allievi *et al.*, 2018) it is argued that such an approach to education can act as the foundation on which the implementation and achievement of SDGs can be built, with students having the potential to be very impactful in this sense, with an increased feeling of global citizenship being able to enhance the adoption of a systemic approach to food sustainability and security issues.

LEARNING LANDSCAPE IN SUSTAINABLE GASTRONOMY

Since Autumn 2014, food studies in the Bachelor's Degree Programme in Service Management at JAMK University of Applied Sciences in Finland have been focused on Sustainable Gastronomy. The aim is to educate responsible food citizens and active innovative agents able to work in various parts of the food chain. The aim is to look at the food system through the sustainable food system lens, a concept created by Blay-Palmer (2010). The process of creating and supporting Sustainable Food Systems is multi-layered and dynamic and calls for an understanding of both local and global implications, both from the consumer's and provider's perspective: this is the dialogue which we would also like to enhance through our programme. According to Blay-Palmer the sustainable food lens offers

a holistic vision of sustainability that goes beyond economic and ecological concerns and priorities by imagining a food system that nourishes one's body as well as one's cultural, spiritual and pleasure needs, to embrace priorities such as accessible, affordable, culturally appropriate, healthful foods. (Blay-Palmer, 2010: 226)

During the aforementioned studies (lasting 3.5 years for a total of 210 ECTS Cr), students learn to understand the food system and chain (Figure 1), their various components, stakeholders and phases. They will develop skills and competences for evaluating the effects of production, processing, logistics, retail and consumption of a product or service in relation to sustainability. After graduation, the students will be able to apply their skills and competences at work and really be the active developers of the food industry.



Figure 1. Logo for Sustainable Gastronomy at JAMK (Raulo, Junttila and Väisänen, 2013)

Learning to understand sustainability calls for a holistic view, system thinking and active dialogue between the stakeholders. Figure 2 introduces the defined learning landscape placing the student's learning in the centre and emphasizing the importance of dialogue between the various stakeholders of the society and education (Junttila 2014, 2019).

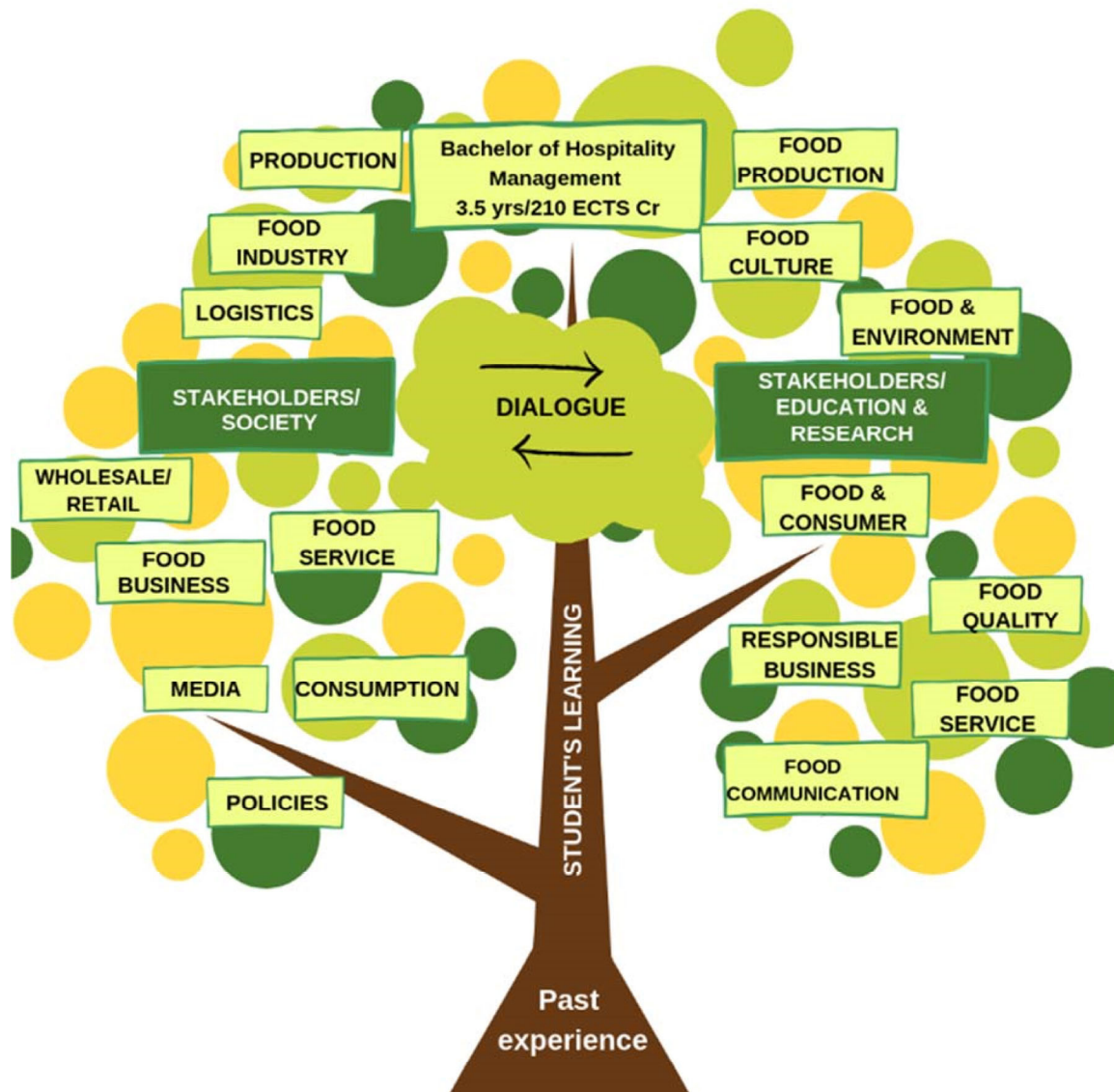


Figure 2. Learning Landscape for Sustainable Gastronomy at JAMK (Junttila, 2019)

SUSTAINABLE GASTRONOMY AND EXPERIENTIAL LEARNING: QUALITATIVE EVIDENCE GATHERED SO FAR

Figure 3 (below) presents the full experiential learning cycle starting from the student's past experience, moving to a concrete experience, continuing with a session of reflective observation (which can occur individually and / or in teams) and with the active experimentation and trialling of what is learnt, and ending with the actual work or study experience as the last step.

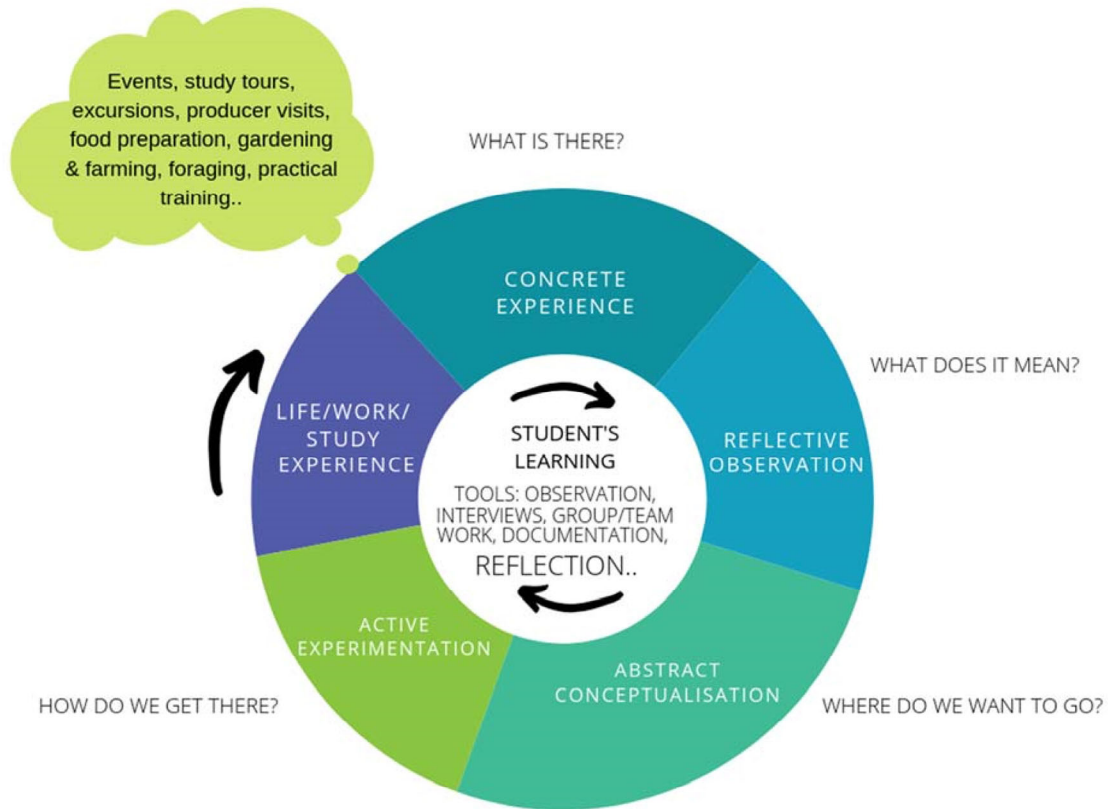


Figure 3. Experiential Learning Cycle at JAMK (Junttila, 2019).
(Adapted from Junttila and Väisänen, 2014; Lieblein et al., 2012 and Kolb, 1984)

The preliminary qualitative data was gathered through an ample variety of experiential learning experiences since the introduction of the Sustainable Gastronomy curriculum in 2014. As experiential learning requires mastering certain skills, it was something that needed to be guaranteed at the beginning of studies; at the same time, it was also a question of 'learning to learn' in higher education. For that purpose a Studio model was developed and implemented in Autumn 2014, and a more structured learning path was created through the enriched learning cycle. The chosen six skills of Observation, Dialogue, Documentation, Communication, Teamwork and Reflection were practiced through Studio culture: one skill per week, one repeatable structure to the day. Each Studio comprised of the Link (Link to previous week), the Showcase (Ideas presented through Pecha Kutcha talks), the Taster (a Workshop starter as an introductory task to the day), the Activity (the main Workshop activity), the Presentation (Presentations and Reflection on the day's activities), and the Synthesis (Synthesis and Link to the following weeks theme) (Junttila & Kay-Jones, 2015).

The process revealed four essential tools for delivering experiential learning. Firstly, having a *similar structure* for each day, and linking the sessions, gave the students an opportunity to see their skills grow and with it their confidence and motivation. Secondly, *Dialogue* is central: learning to evaluate, give and take feedback, and improve their argumentation skills ensures the development of autonomous learners. Thirdly, *ownership* is key: maintaining motivation is only possible by handing students over the ownership of the process and content of their study. Students should feel comfortable enough to experiment and fail, while studio group projects should be linked to individual projects in order to push students to excel and develop 'deep learning'. Finally, *places matter*: providing positive environments for

learning offers students the flexibility and inspiration to develop their motivation. Ownership can be embodied in co-creation spaces but more are needed. Dialogue can be fostered with the correct spatial atmospheres but smaller informal groups are required (Junttila & Kay-Jones, 2015).

The pedagogy chosen seems to foster the development of soft skills: via essays, discussions in class, assignments or blog posts students have expressed how their awareness of food sustainability issues has increased, and how they have applied systems thinking skills while developing interpersonal competences and strategic management skills.

THE WAY FORWARD - CONCLUSIONS

As JAMK will be introducing a new curriculum in Autumn 2020, there are possibilities to explore how Sustainable Gastronomy education can help to achieve SDGs. A monitoring programme will thus be established to assess (1) how SDGs can be included in the Sustainable Gastronomy curriculum; (2) how student's understanding of sustainability issues develops, and (3) how soft-skills are developed through the study years.

In order to tackle the first point of the monitoring programme, all the courses included in the curriculum will use SDGs as a framework for their content and guide students in making connections between the courses' content and the SDGs. Furthermore, students will be encouraged to work in teams and groups, as well as to participate in international events or case study competitions, to foster soft skills development and global citizenship.

For the second and the third part of the monitoring programme, the analysis will start with an assessment through present situation analysis on the students' skills and competences and understanding of sustainability. At the end of the first study year, in the first progress analysis, both quantitative surveys and qualitative one-to-one interviews will be used in order to assess the progress of the students. The authors will undertake a literature review during this first year, in order to understand which techniques could better suit the purpose of assessing soft skills development. The Curriculum 2020 first year studies will be also evaluated in relation to SDG and the required adjustments will be made.

The preliminary timeline for the different parts of the programme is presented in Figure 4.

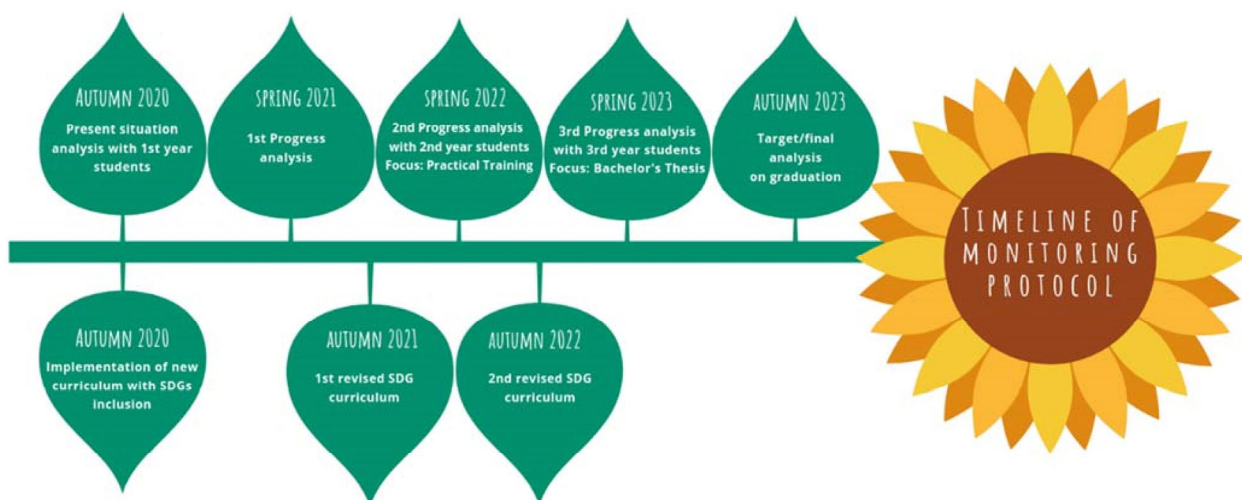


Figure 4. Preliminary timeline for collecting data in order to assess the success of the new curriculum.

At the end of both the second and the third study year there a progress analysis will be undertaken, with special focuses on practical training (2nd year) and Bachelor's Thesis (3rd year). Consequently, revisions to Curriculum 2020 will be made if so needed. On graduation, the target situation analysis will be carried out, and the results will be compared to the present situation analysis of the first autumn.

Developing the new Curriculum 2020 with SDG framework is currently in its early stages and the actual work begins in August 2019, therefore in this paper the authors have only introduced their work plan and theoretical framework. Given the potential of the educational approach described here in the context of the current societal challenges, the authors will continue to report their progress and results in future research papers.

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