

## **To more Sustainability in Education through Cooperation with Industry**

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In our modern world in order to achieve different personal and professional targets, it is important to collaborate with different parties and stakeholders – not just within companies and with all their suppliers and clients but between different groups in a society. Collaboration is also one of the 17 Sustainable Development Goals and is something that can contribute enormously to the success of every idea.

Universities, especially applied universities, try to use many examples from industry and real economy to illustrate theoretical aspects. However, it is high time to level up this kind of interaction to a new standard – not just using those case studies and examples, but by active involving both sides into the teaching and learning process and by implementing existing questions and problems of the industry into educational curriculum. In this way, to create new educational environment, that is very relevant, very up-to-date and extremely needed. Not just doing theoretical exercises, but to work on real problems, to design solutions that can be used tomorrow and to provide real results by implementing theoretical knowledge and practical experience of both parties.

That was the idea of the new concept combining research-based teaching with result-oriented cooperation with companies implemented at University of Applied Sciences Dresden in the course on “Sustainable Supply Chain Management” in winter term 2019-2020. The course was designed at the Faculty of Business Administration for Industrial engineers. Nevertheless, the idea of the course got spread among other students from other faculties, studying e.g. environmental engineering, who joined us and provided very interesting insights from a different subject area and therefore contributed a lot to the idea of interdisciplinarity.

The course started with creating a “morphological box” - trying to emphasise what different aspects within Supply Chain Management, in what industries, with what kind of tools can be improved and how the results can be created and made visible. That was our “roadmap” for the whole semester. Some theoretical inputs as well as Case Studies from companies working on the issue of Sustainable Supply Chain Management were presented at the beginning of the course to start the “ball rolling”. Positive and negative aspects of some decisions made by those companies were analysed, summarized and structured in teams and presented at an “exhibition” to other students. Next step was visiting some globally operating local companies in the region of Dresden to get acquainted with processes of SCM. In discussions and workshops with different specialists from Quality Management, SCM, HR-Department, Plant Manager, Chief Procurement Officer, Logistics Manager lots of sustainability-relevant issues were worked out and identified. Those issues and challenges companies were facing students got as their “homework” to be solved. In

the next phase of the course, some of experts from worldwide operating international companies with awards and considerable contribution to the issue of Sustainability (like Green Logistics award and innovative sustainable Industrial Solutions) were invited to provide students with their understanding of Sustainability, so that students can learn from them.

After collecting and exchanging that information students started to create their own solutions for companies visited but also for all other possible interested parties who would like to improve their impact on Sustainability in the world and to consider sustainability issues in their processes. Ideas were created and presented in different forms. 1) Posters on Sustainable Product Design, Sustainable Procurement, Sustainable Production, Sustainable Logistics, Sustainable Inner Transport, Sustainable Recycling and CSR were designed in groups and introduced to each other. 2) Upon those ideas and by considering all relevant issues Checklists were created for companies to enable them to go through different aspects of Sustainability and at first to analyse the current situation within a company, secondly to identify weak points in their business processes and thirdly to implement those ideas throughout the whole Supply chain. 3) Next step of that solution-oriented approach was to analyse all the modern social and digital trends that would affect SCM. Students created a holistic mind map (working at first in small groups on separate topic and afterwards bringing the results together) to present those overviews for companies. Moreover, students created a holistic scheme on possibilities of implementation those tools into Supply Chain Management processes in order to present their ideas on how digitalization might affect and improve Supply Chains' performances. 4) The most challenging task to generate results identified by students at the beginning of the course while creating that "morphological box" was the development of videos. This particular instrument to provide knowledge was identified as a very efficient tool to provide to companies and their employees, because with those "learning chunks" it might be much easier for the public to "digest" particular aspects of Sustainable Supply Chains. 5) To be able to present the results also analogue and in a innovative and visible way we used creativity boxes, RFID-tools and Lego blocks for creating those tools and ideas in a "touchable" form for a better illustration and demonstration. All those results (Posters, Mindmaps, Checklists, Videos and "haptic constructions") were provided back to companies. Proud of their creative solutions students got kind of self-assurance, a positive mind-set on their abilities and skills and understood that if they keep to the idea and work hard on some particular issues, then it is possible to "move" and change "the world". We are sure that even if our business partners found not everything applicable now, those results were a very strong impulse to all partners and a drive for other steps and ideas towards developing a more sustainable manufacturing and business environment.

Apart from companies, this approach was a huge success with students and there are many reasons for this: the lessons were very interactive; students were highly motivated, because they saw the advantage and the need of that particular work. They learnt a lot from that cooperation because they were "at the scene", observing and speaking about those relevant issues of the course with people who are involved into real daily processes. By doing research on their own and by working in groups

they had to deal with issues of their own discipline, team working, empathy and ability to listen to each other. Students used different tools applying creative thinking, learning about our social and business challenges, communicating with different partners and implementing those digital tools for creating their own “products”. We aimed at two targets – to learn a lot and to provide that learning back to other stakeholders and in this way to contribute to the more Sustainability through Cooperation (SDG 17). In addition, there is one more aspect that makes this approach especially outstanding - the possibility to work not just on problems but towards problem-solving – this is one of the main criteria companies are looking for in the future specialists – creating results through Collaboration!