Developing a Teaching Package about Designing Sustainable Packaging

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The Netherlands Institute for Sustainable Packaging and the Top Institute Food and Nutrition have set up a project to obtain new scientific insights in the field of sustainable packaging. The University of Twente develops a teaching package with the aim of making the obtained insights available for future packaging designers. The teaching package is designed as a minor. The target group for this minor include students who follow a programme in the field of packaging design at a university of applied sciences. The content of the teaching package is based on five 'Challenges'. These Challenges are five different perspectives on sustainable packaging design, which are based on researches that have been set up by the project. For developing the teaching package, these scientific researches must be translated into appropriate teaching materials. Besides that, a project assignment has to be developed for the students to apply the obtained knowledge and connect the Challenges.

For this bachelor assignment, several analyses have been done which are useful for designing the teaching package. Firstly, research on designing education has been done. This research results in guidelines on developing effective lectures and assignments. In addition to this, the target group has been investigated. The target group comprises students of two different design programmes, both offering a specialisation track on packaging design. The target group analysis also includes a research on the characteristics of the education which suits the target group.

The last part of the analysis consists of investigating the contents that will be taught during the minor. The teaching package will include the following Challenges:
- Challenge 1 'Environmental Impact Assessment' covers a tool which evaluates the environmental impact of the entire life cycle of packaging.
- Challenge 2 'Design Tools' covers methods and tools to incorporate sustainability in the design process of packaging. Furthermore, the Challenge provides insights in decision-making and trade-offs which are made during the development process of packaging.
- Challenge 3 'Consumer Purchase Behaviour' deals with purchase behaviour towards sustainable packaging and how this behaviour can be influenced.
- Challenge 4 'Consumer Recycling Behaviour' investigates how the recycling behaviour of consumers can be influenced by packaging design.
- Challenge 5 'Plastic Waste Chain' provides insights in the recycling chains of materials and supplies guidelines to design packaging to optimally suit the recycling system.

Subsequently, an overview on the schedule of the minor is given. During the minor students will obtain new knowledge from the Challenges. Simultaneously, the knowledge has to be applied on a project assignment in order to design a sustainable packaging.

As an end result, a 'design game' has been developed. The game serves as a guidance tool for designing sustainable packaging and contributes to applying the knowledge of the Challenges. An important element in the design game are the roles which the players have. Besides the traditional roles one new role of 'sustainability guardian' is added. Each role aligns with one of the Challenges. The players contribute to the design from the perspective of their role. In the end, the design game leads to a new concept design that incorporates sustainability from different perspectives. Besides that, the design game provides insight into the trade-offs which are made during the design process.

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The design game has been tested with a group of people. This test points out that the game works as a method to specify a concept design, provided that the players have certain knowledge. Besides that, the design game can serve to initiate a discussion about the design. In addition to testing the game, the roles of the game have been evaluated with the target group. This evaluation indicates that the role descriptions in combination with a concept design work to generate ideas which can be an input for the design game.

In the future, the design game will be developed further to suit the teaching package better. The game still needs to be tested with designers and evaluated with the researchers of the Challenges.

References
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