Fashion DIET

Introduction to Teaching and Learning Materials

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ТРАКИЙСКИ УНИВЕРСИТЕТ
СТАРА ЗАГОРА

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ESD and Professional Development

- There are links between ESD and the professional development of educators (university teachers, teachers, trainers).
- In order to achieve the necessary sustainable transformation of society and the economy by 2030, the Roadmap ESD 2023 of the German Commission for UNESCO (2021, p. 30) sees the competence development of teachers as one of five priority fields of action.
- For this, teachers need an understanding of holistic and transformative action processes as well as reflective knowledge of their sustainability-related pre-concepts and research-based knowledge.

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Universities as Innovators for a Sustainable Development

- Universities are important (educational) institutions where ecological, social and economic dimensions of society are considered in an integrated way.
- The aim is to develop solutions for current and future challenges and to train decision-makers for various fields of action (Bellina et al., 2020). Therefore, the curricular implementation of ESD in all study programmes is demanded (Molitor et al., 2023).
- In this way, it should be possible to make justifiable decisions despite unresolvable complexity and contradictions - also about pre-concepts and research-based knowledge (Pettig, 2021).
- Emancipatory reflection, decision-making and action skills for sustainably oriented design competence are aimed for.

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Teaching and Learning for Conceptual Change

- The promotion of the necessary skills of knowledge acquisition, critical reflection, autonomous decision-making and action (Getzin & Singer-Brodowski, 2016) is a task of teacher education.
- In order to implement ESD, teachers need sustainability-oriented design competence, which is based on subject knowledge, skills as well as sustainability knowledge, motivation and reflection of their own convictions.
- For teachers in the context of fashion and textiles, the question arises how complex problem areas in subject theory and subject practice can be developed in the sense of ESD to promote **emancipatory design competence**.
- The learning objective of "**change agent competence**" (Bellina et al. 2020, p. 29) can be divided into four overarching parts.

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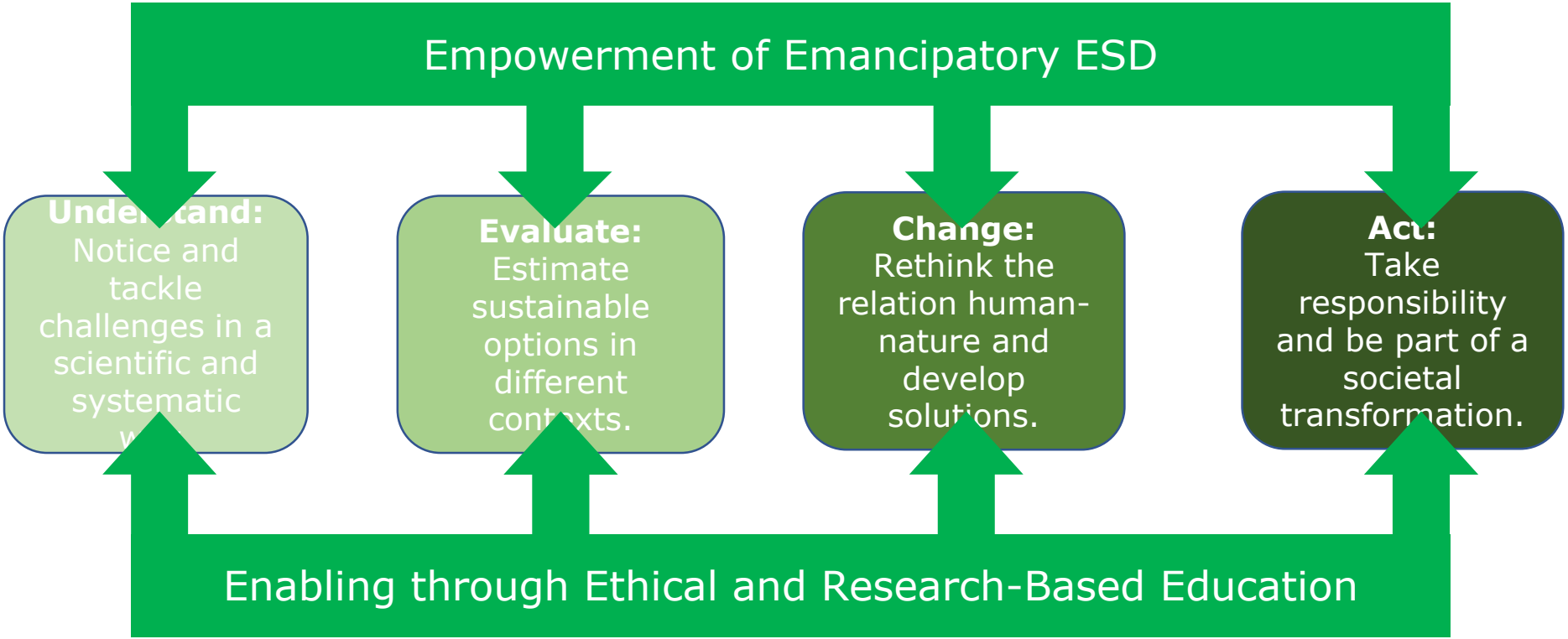
Goals of ESD in Higher Education



Modified from Bellina et al., 2020, p. 33

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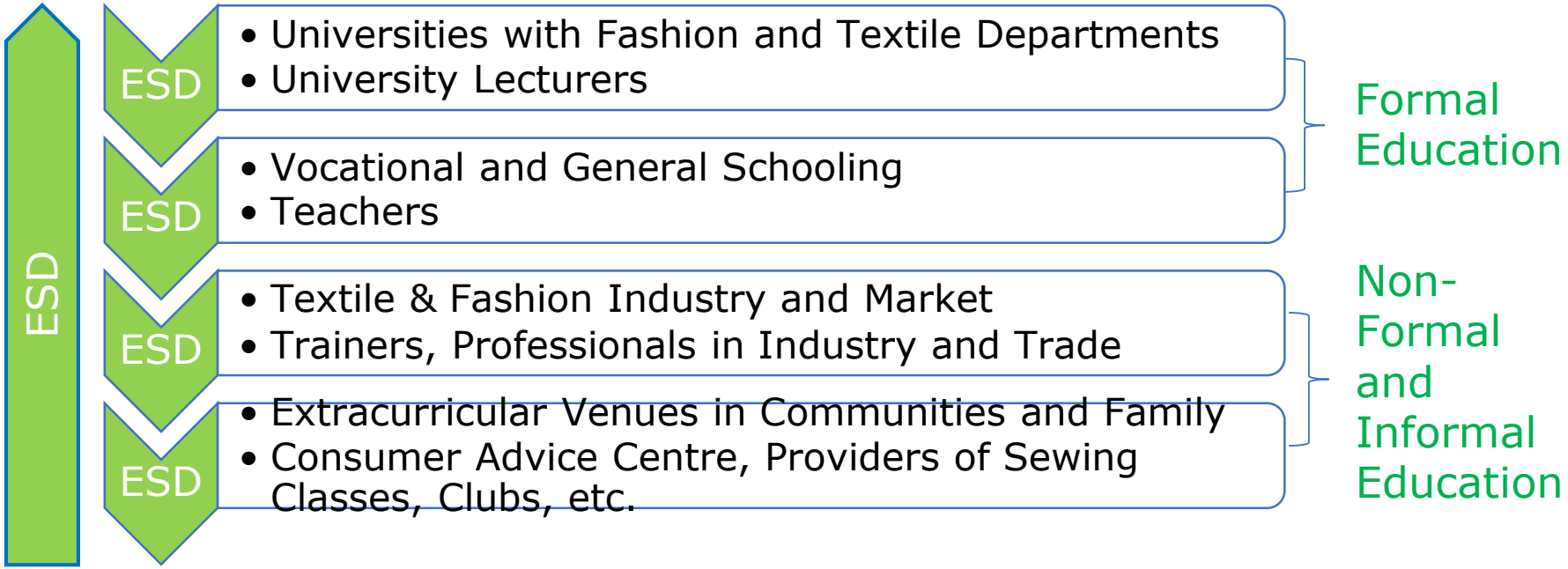
ESD as Guiding Principle in Textile and Fashion Education



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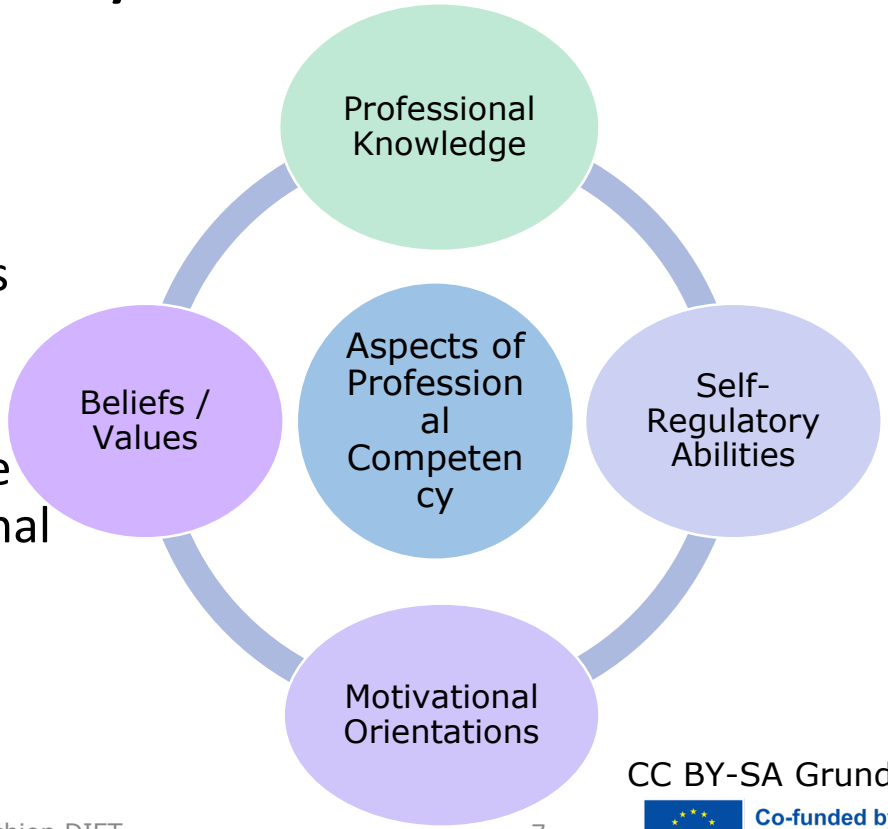
Professional Competency of Teachers

- The professional knowledge of teachers is primarily based on subject knowledge, practical skills and subject didactic knowledge.
- Pre-concepts, beliefs, motivation as well as self-regulatory skills are also part of a teacher's professional competency (Kunter et al., 2011).



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Teachers‘ Pre-Concepts

- Pre-concepts refer to ideas that people have developed, e.g., about sustainable fashion consumption before they are confronted with concrete scientific concepts.
- They stabilise one’s understanding of the world and enable predictability, manageability and understanding of the meaning of recurring (everyday) phenomena.
- This includes ideas about everyday phenomena as well as scientifically relevant phenomena, such as climate change, and might also lead to misconceptions.
- Therefore, scientists call for science-based teaching and learning in higher education and school education. (Kreber et al., 2005).

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Eco-fair: What suits my teaching?

It's all greenwashing anyway. How am I supposed to set a direction for fair fashion?

I would love to dress ecologically fair and point it out to my class, but I just can't afford the prices for it.

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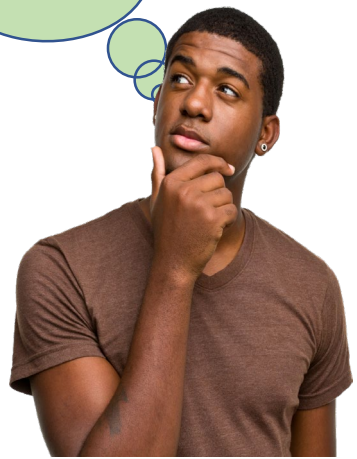
Eco-fair: What suits my teaching?

Polyester fibres are part of it, especially if you do sports. Besides, you can recycle them.



I don't like polyester on my skin. Cotton is much better. I will only cover natural fibres in class.

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Eco-fair: What suits my teaching?

I want to encourage creativity, so I use new materials, but I look for eco-labels.

I now only do textile design lessons with recycled materials - anything used is better than new.

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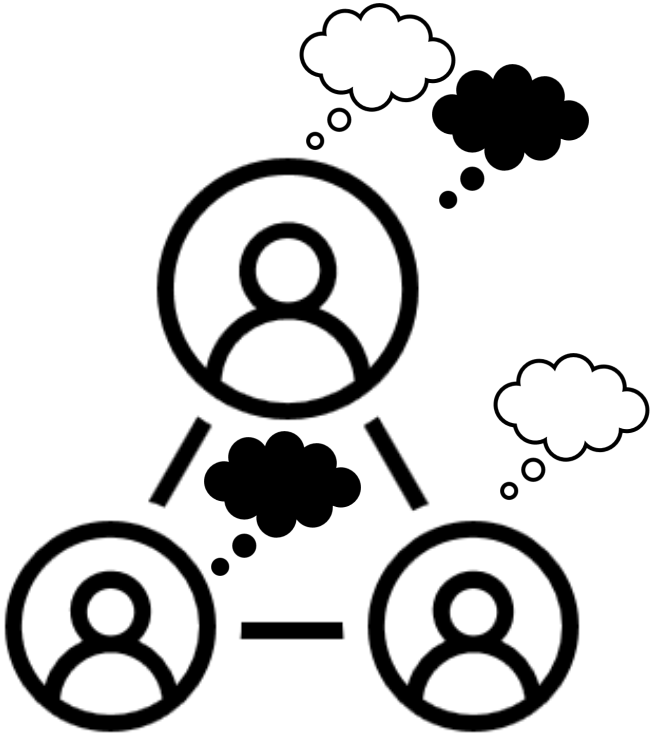
Pre-Concepts in Teaching and Learning Arrangements

- For **educators** it is important to know their own pre-concepts, ideas and beliefs in order not to pass them on unconsciously and indirectly. This is part of their professional competency.
- However, it is also important to know the **learners'** pre-concepts, ideas and beliefs. Consequently, they can be brought into teaching-learning arrangements as part of the students' lifeworld and can relate to subject-specific concepts.
- In order to recognise pre-concepts, ideas and beliefs, reflective thinking is required, which should be facilitated in teaching-learning arrangements.



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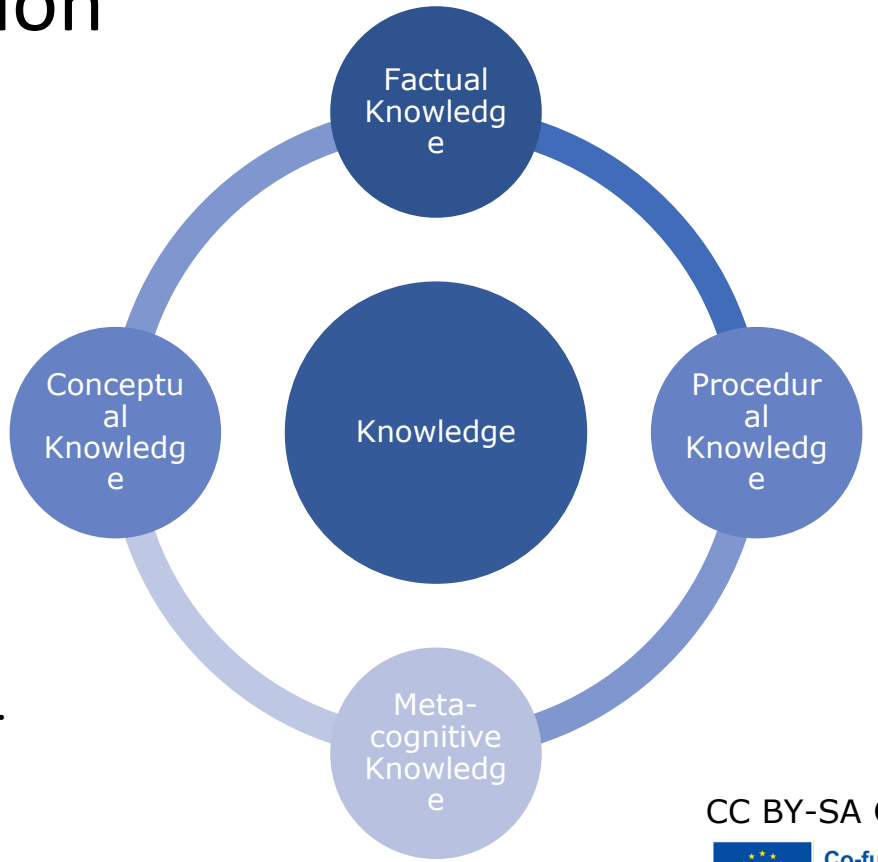
Knowledge and Action

- In the relevant literature, knowledge is understood as all content stored in long-term memory in the form of knowledge representations (Dornheim & Weinert, 2019).
- Different types of knowledge are distinguished: Factual knowledge, conceptual knowledge, procedural knowledge and metacognitive knowledge (Worbach et al., 2019).



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Conceptual Knowledge and ESD

- Conceptual knowledge is the knowledge about the relationships between facts. This type of knowledge is particularly significant in ESD topics, as the challenges of today's globalised world are complex and depend on and are influenced by many factors.
- The acquisition of conceptual knowledge is an important basis for future action. Thus, the students must first become aware that their (consumer) behaviour has consequences for society and that everyone can make an important contribution with his/her behaviour.
- For sustainable behaviour, basic assumptions and knowledge about
  - behaviour and its effects,
  - norms and values, and
  - one's own possibilities of influence (self-efficacy)

  are of importance (Bamberg et al., 2018).

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Procedural Knowledge and ESD

- Procedural knowledge, also referred to as action and method knowledge (Worbach et al., 2019), is particularly crucial for (future) environmentally conscious behaviour.
- Research shows that environmental topics that pupils have dealt with intensively lead to environmentally conscious behaviour in the respective area (Wehner & Leser, 2012).
- At the level of the personal ecological norm, knowledge, self-efficacy, control, habits, experiences and alternative actions are significant influencing factors (Bamberg et al., 2018).
- Thus, a person's intention to perform a particular behaviour is influenced by their perceived confidence in their abilities (Haddock & Maio, 2014).

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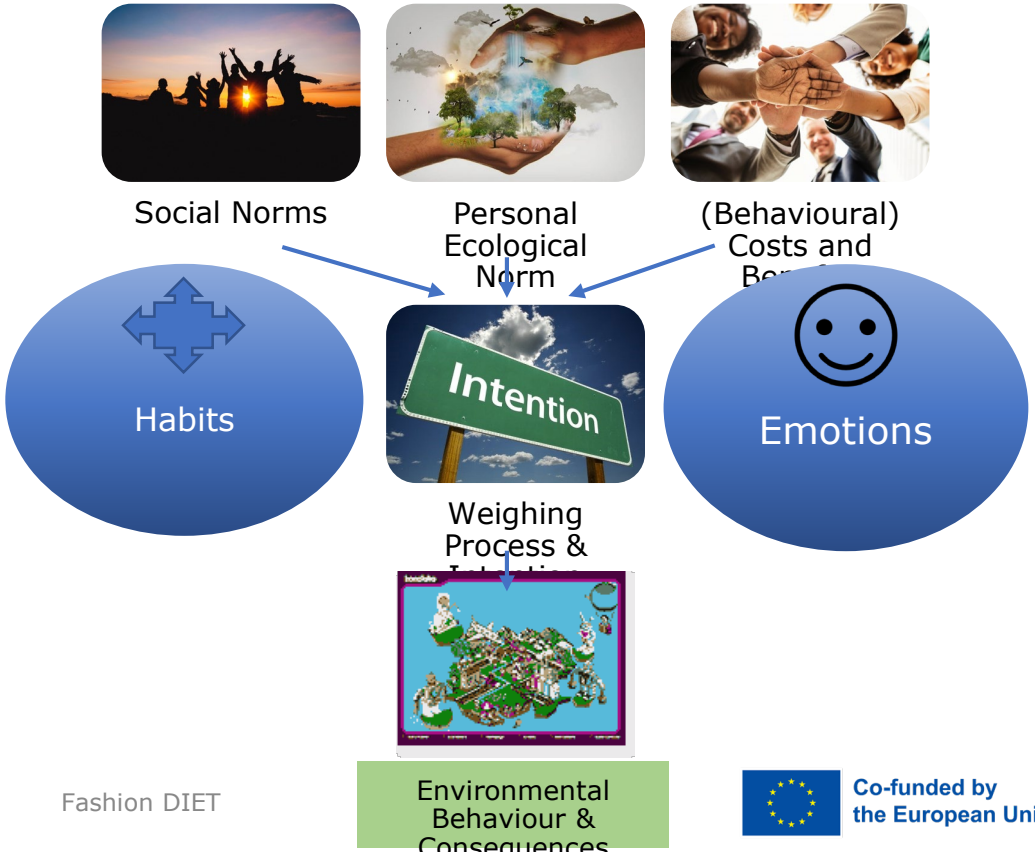
Psychological Model to Explain Sustainable Action

At the level of the personal ecological norm, knowledge, self-efficacy, control, habits, emotions, experiences and alternative actions are significant influencing factors and lead to a weighing of costs and benefits (Bamberg, 2018).



Modified from Hamann, Baumann & Löschinger, 2016, p. 20

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Goal of ESD

“ESD is simply good education and good education makes children aware of the growing interdependence of life on Earth, interdependence among peoples and among natural systems in order to prepare them for the future” (Charles Hopkins, one of the authors of Chapter 36 of Agenda 21, 2002, 42, quoted by Steiner, 2011, p. 56).

EDS should enable people to shape the future with visions, imagination and creativity, to dare to try new things and to explore unknown paths. Accordingly, its methods are innovative and diverse (Bundesministerium für Bildung und Forschung, 2012).

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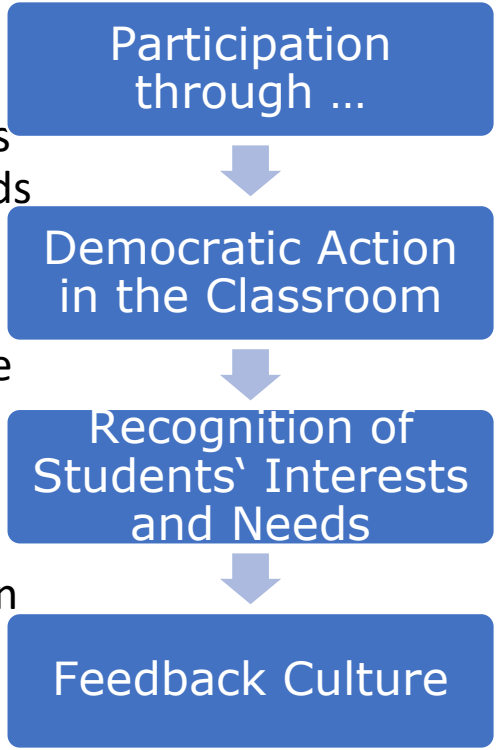
Participatory Learning and ESD

- Participatory learning or participation in decision-making processes is central to sustainable development. Therefore, it is important to integrate participatory learning forms and methods in the classroom and to promote communication, cooperation, reflection and planning skills (Keuler, 2019).
- This approach also creates challenges for cooperation when the practice-based ideas for designing sustainability-oriented teaching/learning processes deviate from the scientific demands.
- Further quality criteria are the student and lifeworld orientation (Brundiers et al., 2010) as well as the experience and action orientation. Thus, good examples of ESD show real possibilities for action. They are action-oriented. (ANU, 2000).



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Quality Criteria for Best Practice (1)

Within the framework of the ANU 2000 project, quality criteria for best practice examples of ESD were formulated.

- Best practice examples of ESD are competence-oriented: they promote design competence and teach the key competences needed for this.
- They work with interactive and participatory methods that are suitable for teaching design skills.
- A participatory approach in which learners and teachers **together** identify, determine and shape relevant topics for sustainable design corresponds to the transformative claim of ESD (Holst et al., 2020).

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Quality Criteria for Best Practice (2)

- Learning is an active and social process that builds on previous knowledge, draws on a variety of sources, and requires motivation. Therefore, ESD requires learning situations that enable learners to learn actively in authentic, real-life environments (Schneider, 2013).
- Another important quality criterion is the selection of a key theme such as consumption and lifestyle, global learning, global environmental risks (Brundiers & Wiek, 2020).
- ESD-relevant topics should concern a central local and/or global problem issue, be of longer-term significance, be based on broad and differentiated knowledge about the topic and offer as much potential for action as possible (Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit, 2016).

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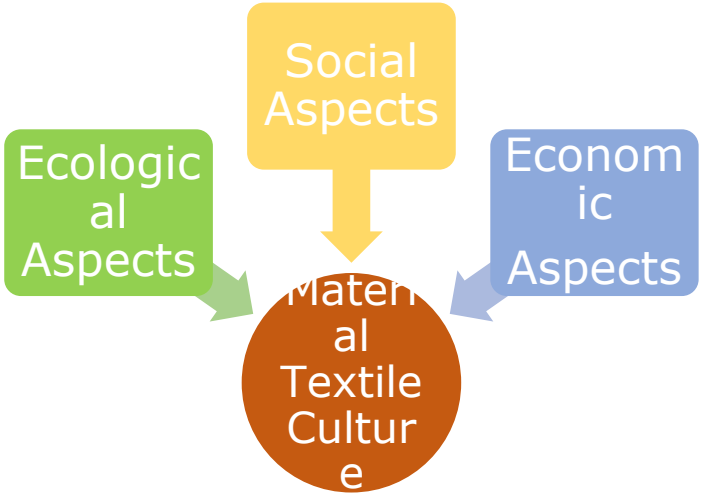
Multi-Perspective Learning for ESD

- In class, the selected topic should be considered from several perspectives (ecology, economy and social).
- Multi-perspective learning means that, on the one hand, the subjective perspectives of the students and, on the other hand, the scientific perspectives of the topic are included.
- Knowledge transfer and recommendations for action should be scientifically sound as far as possible.
- Open questions or contradictory views should also be presented as such. (ANU, 2000).



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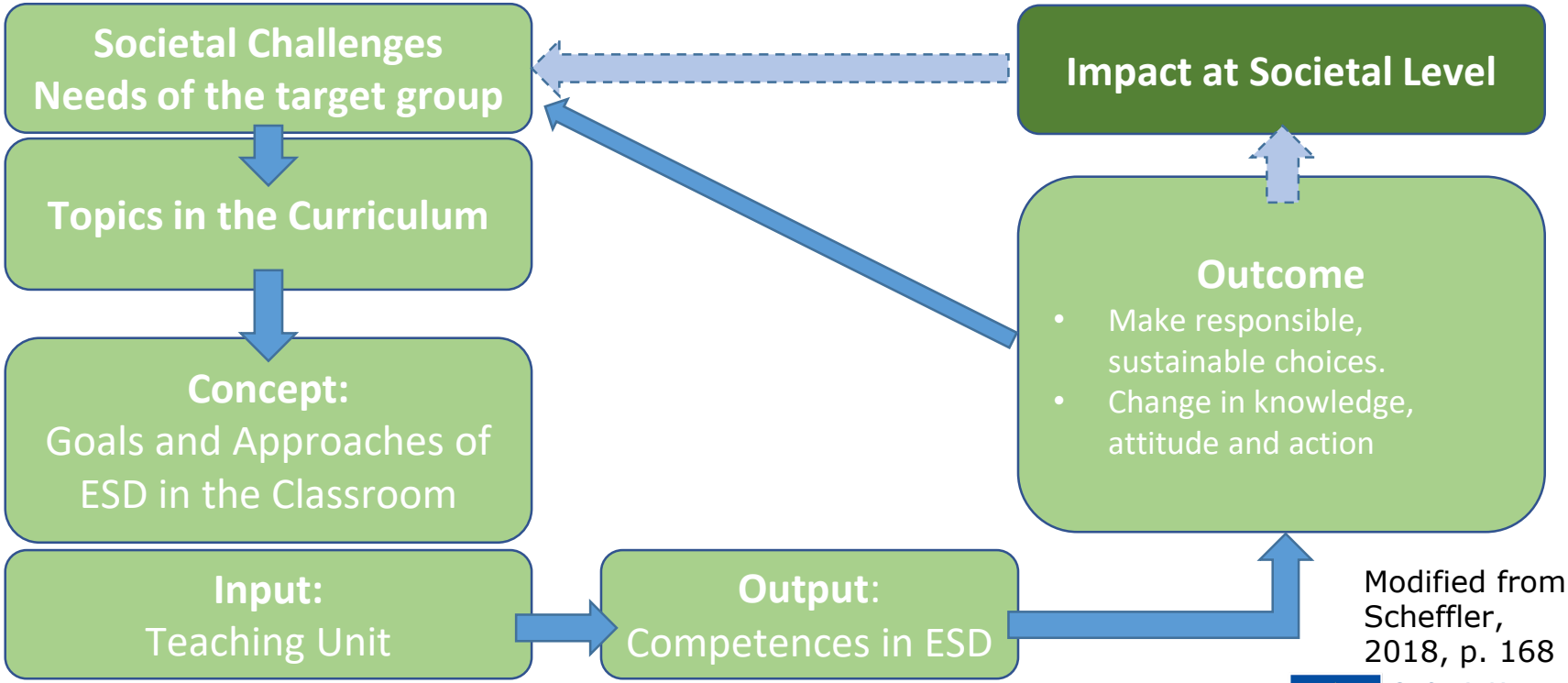
Impact Model on ESD in the Classroom



Modified from Scheffler, 2018, p. 168

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Self-Evaluation Questions

Questions to be used for self-evaluation following the conception of the teaching unit:

- Does the lesson adequately address economic, social and environmental impacts?
- Are the students' previous experiences or knowledge considered?
- To what extent do the students reflect on the consequences for future generations?
- Are concrete possibilities for action shown? (Bouverat, 2013, 82)

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Excursus: Sustainability in Vocational Education and Training (1)

- In the context of the transformation towards sustainability, today's economy and society are being asked to reorient established production methods, consumption patterns and lifestyles (United Nations, 2015).
- Companies are called upon to recognise sector-specific challenges to sustainability and to develop socially responsible solution strategies.
- The economy and the professional world are of paramount importance when it comes to leaving future generations an ecologically, socially and economically intact environment.
- In order to develop social and technological innovations which shape sustainable transformations, professionals who think and act sustainably are needed.

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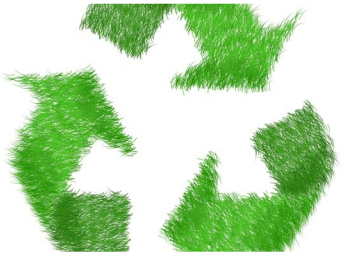
Excursus: Sustainability in Vocational Education and Training (2)

- Vocational education and training shall impart the vocational skills, knowledge and abilities (vocational action ability) that are necessary for the performance of a vocational activity in a changing professional world.
- Current standard vocational training positions are law, security, sustainability and digitalisation.

Law

Security



Sustainabiliy

Digitalisation

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Excursus: Sustainability in Vocational Education and Training (3)

- Vocational education and training is seen as the key to sustainable transformation of the professional world.
- The aim of vocational education and training for sustainable development is to promote competences with which the working and living environment can be shaped in the sense of sustainability.
- In doing so, it is important to orient professional action towards its ecological, social and economic consequences. (Hemkes et al., 2013).
- The following also applies in vocational education and training: Sustainability is not a separate subject or topic, but the contents are viewed or reflected on from the guiding perspective of ESD.

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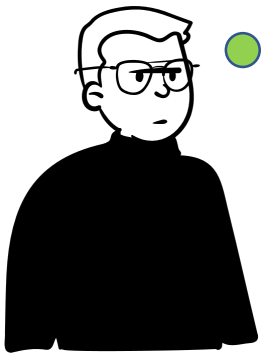
Didactic-Methodical Implementation of ESD in the Professional Field

- Professional
- Pedagogical/didactic-methodical
- (infra-)structural
- Examples are model experiments that exist for some vocational training and further training programmes.



What does sustainability mean in the professional field?
How should this be implemented in the vocational training?
How can I learn to teach t

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Examples Set a Precedent: Pilot Project in the Retail Sector

- The aim of the FOENAKO project is to qualify retail employees in sustainability skills.
- Key sectors such as food, textiles and electrical goods were selected, for each of which a development team was formed.
- The intention was to work collaboratively in development teams of company trainers and vocational schoolteachers to develop teaching and learning arrangements.
- All support measures and tools are summarised and documented in the FOENAKO tool kit, which is freely available on the pilot project's homepage. (Hagel & Riedel, 2021).

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Teaching Fashion and Textiles in Theory and Practice

If you are teaching fashion and textiles in theory and practice with the goal of promoting ESD, there are several key things to keep in mind:

1. Incorporate sustainability into all aspects of the curriculum: Make sure that sustainability is integrated into all aspects of your teaching, including design, production, and consumption.

2. Use real-world examples: Use real-world examples to show students the impact of the fashion industry on the environment and society, and to show the positive impact of sustainable practices.

3. Emphasise the importance of ethical and responsible design: Teach students the importance of designing clothing and textiles that are made with respect for the environment and for the people who produce them.

4. Encourage creativity and innovation: Encourage students to think creatively and innovatively about how to design and produce clothing and textiles in a sustainable way.

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Teaching Fashion and Textiles in Theory and Practice

5. Provide opportunities for hands-on learning: Provide opportunities for students to gain practical experience with sustainable textile and fashion production methods.

6. Address the entire life cycle of textile products: Address the entire life cycle of textile products, from sourcing of raw materials through production and consumption to end-of-life management.

7. Encourage critical thinking and research: Encourage students to think critically about the fashion industry and to conduct research on sustainable practices and technologies.

8. Use a multi-disciplinary approach: Use a multi-disciplinary approach by incorporating diverse perspectives, such as social, economic and environmental, in teaching fashion and textiles.

By following these guidelines, you can help students develop the knowledge and skills they need to contribute to a more sustainable fashion and textile industry.

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Why OER on ESD in the Context of Textiles and Fashion?

- Open Educational Resources (OER) are educational materials of any kind and in any medium that are published under an open licence.
- They allow you free access and free use, adaptation and redistribution of materials without or with minor restrictions.
- The OER Fashion DIET comprises 42 lectures at university level with PPPs, PDF-files and short introductions into different ESD topics.
- The ESD module with 42 lectures is complemented by teaching and learning materials for general and vocational education and training.

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Further Materials

- Digital Society School (n.d.). *Design method toolkit*. https://toolkits.dss.cloud/design/
- Deutsche UNESCO-Kommission (2021). *Learning to Change the World. What is Education for Sustainable Development*? https://www.youtube.com/watch?v=YUFqamr78Xk
- SUSTAINICUM COLLECTION (n.d.). *Teaching Methods*. https://sustainicum.at/resources/methods
- Standford d.school (n.d.). *Tools for taking action*. https://dschool.stanford.edu/resources
- Universität Bremen. Virtuelle Akademie Nachhaltigkeit (n.d.). *Sustainability Communication*. Open Course. https://oncourse.uni-bremen.de/blocks/occoursemetaselect/detailpage.php?id=29&lang=en
- Universität Bremen. Virtuelle Akademie Nachhaltigkeit (n.d.). *Sustainability Marketing*. Open Course. https://oncourse.uni-bremen.de/blocks/occoursemetaselect/detailpage.php?id=7
- UNESCO (2017). *Education for Sustainable Development Goals. Learning Objectives.* https://www.unesco.de/sites/default/files/2018-08/unesco_education_for_sustainable_development_goals.pdf

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Further Materials

- Digitale Werkzeugkiste 1: https://padlet.com/ajoth1/digitale-werkzeugkiste-teil-1-lw122tw6u4oh
- Digitale Werkzeugkiste 2: https://padlet.com/ajoth1/digitale-werkzeugkiste-teil2-qk5gjl0n6utq
- Digitale Werkzeugkiste 3: https://padlet.com/ajoth1/digitale-werkzeugkiste-teil-3-h6v0jkfm5nwk

- Google Arts and Culture: https://www.taskcards.de/#/board/3cfd6345-ca65-40b2-80e7-a44c56fe306d/view/30d3919a-af65-4895-9ffc-502edef6eb02

- Joachim Herz Stiftung (Ed.). Mint Digital: https://www.joachim-herz-stiftung.de/was-wir-tun/naturwissenschaften-begreifen/naturwissenschaften-vermitteln/lehrerfortbildungen/

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- A full citation of text and image sources is always given at the first mention of the authors in the notes beneath the slide, otherwise short citation in the text or on the slide.

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