

# **Practical examples on how to embed the United Nations Sustainable Development Goals in Learning and Teaching**

Angharad McLaren, School of Art & Design  
Lina Erlandsson, NTU Green Academy

 **SUSTAINABLE DEVELOPMENT GOALS**



# SDG Accord

- NTU is a signatory of the SDG Accord – a collective response from the University and College sector to the Sustainable Development Goals
- Opportunity to sign as an individual:

<http://www.sdgaccord.org/>



The banner is split into two main sections. The left section has a dark blue background with white text that reads "We have signed the SDG Accord". Below this, it says "Countries have signed the Accord globally" next to a globe icon and the large number "39". To the right, it says "30" in large yellow font, with "Endorsing Partner network sign ups in the first week" below it. The right section has a gold background with the text "Join us & sign up!" and a mouse cursor icon. At the bottom right is the "SUSTAINABLE DEVELOPMENT GOALS" logo.

# Curriculum Refresh



<b>Action</b>	ES404 We will continue to be recognised as a leading exemplar of an environmentally responsible and sustainable organisation.
<i>Ref</i>	<i>Item</i>
F1	Students explore how aspects of the discipline contribute to one or more of the Sustainable Development Goals. <sup>2</sup> The course provides opportunities for students to explore the potential of their discipline to interconnect with other disciplines or areas of expertise and make creative leaps forward. (Knowledge and understanding)



# The Sustainable Development Goals at Nottingham Trent University



## Curriculum Refresh

The SDGs are embedded in the university-wide course evaluation process Curriculum Refresh

## NTU and the Sustainable Development Goals blog

[www.ntu-sdgs.blog](http://www.ntu-sdgs.blog)

## Future Thinking Learning Room

An online resource library containing resources, estate and community case studies and examples of good practice, all linked to the SDGs

## Student Outreach

Seeking feedback from students on how they would like to embed the SDGs in their courses

## Staff development

The SDGs are introduced in staff workshop to clarify the sustainable development concept

## Sustainability in Practice

Getting students to reflect on interdisciplinary collaboration using the SDGs

# Sustainability in Practice

Welcome to Session 3!

How are various disciplines/subject areas working together to address Sustainability & Clothing?

A good example of this is the United Nations Sustainable Development Goals (SDGs).



Watch the video below to get an overview of what the goals stand for:



# Student engagement – Comments from Academic Reps 2016-17

“Why haven’t our lecturers told us about these goals?”  
*-ADBE Student*

“The SDGs should be introduced in tutorials”  
*- NLS Student*

“We should have more lectures on the SDGs specifically”  
*- NBS Student*

“I don’t really see how they are relevant to our course”  
*-S&T Student*

“They look nice!”  
*- NBS Student*

# Student engagement – Comments from Academic Reps 2017-18

“We’ve been made aware of the Global Goals, but I want further indication on how to follow up on them”

*- Arts & Humanities Student*

“A lot of environmental aspects are covered, but more social aspects should be covered”

*- S&T Student*

“We try to relate what we study to the SDGs at the start of every lecture”

*- ARES Student*

“The goals should be embedded from the beginning; it would make it easier to apply them”

*- ARES Student*

“We’re already covering many of the goals on the course, but a lot more could be done”

*- ADBE Student*

# Using the SDGs in A&D: Textile Design



An estimated 350,000 tonnes of used clothing ends up in landfill each year in the UK <sup>2</sup>

Textile & clothing industry = 2<sup>nd</sup> most polluting in the world <sup>3</sup>

1 War on Waste, BBC1: <http://www.bbc.co.uk/programmes/b06nzl5q>

2 WRAP (2012). *Valuing Our Clothes: The true cost of how we design, use and dispose of our clothing in the UK.* <http://www.wrap.org.uk/content/valuing-our-clothes>

3. Ecowatch (2015) *Fast Fashion Is the Second Dirtiest Industry in the World, Next to Big Oil.* <https://www.ecowatch.com/fast-fashion-is-the-second-dirtiest-industry-in-the-world-next-to-big--1882083445.html>

Decisions made in design are responsible for eighty to ninety percent of a product's environmental and economic costs <sup>1</sup>

*This places a clear responsibility in the lap of the designer and is the driver for the development of the sustainable textile design strategies <sup>2</sup>*

### Box 1.1. Key competencies for sustainability

**Systems thinking competency:** the abilities to recognize and understand relationships; to analyse complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.

**Anticipatory competency:** the abilities to understand and evaluate multiple futures – possible, probable and desirable; to create one's own visions for the future; to apply the precautionary principle; to assess the consequences of actions; and to deal with risks and changes.

**Normative competency:** the abilities to understand and reflect on the norms and values that underlie one's actions; and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interests and trade-offs, uncertain knowledge and contradictions.

**Strategic competency:** the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.

**Collaboration competency:** the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.

**Critical thinking competency:** the ability to question norms, practices and opinions; to reflect on own one's values, perceptions and actions; and to take a position in the sustainability discourse.

**Self-awareness competency:** the ability to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.

**Integrated problem-solving competency:** the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solution options that promote sustainable development, integrating the above-mentioned competences.

<sup>1</sup> Graedel et al. 1995

<sup>2</sup> Textiles Environment Design (TED Textiles), <http://www.tedresearch.net/about/>

<sup>3</sup> United Nations 'Education for Sustainable Development Goals (SDGs)', 2017: <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>

*Fashion education at university level encompasses **an intertwining of theoretical, technical and practical elements that make up a range of artistic and business-focused manifestations** of a phenomena close to the centre of the modern world (Svendsen 2006). This **complexity** can lead to a reductionist perspective on sustainability, focused on individual problems in its parts, to be solved by the cognitive skills of knowledge, **but this approach often succeeds in disabling students who may feel burdened by the enormity of the problem** (Fletcher and Williams 2012).*

***As a values-led process however, fashion education for sustainability offers the chance to explore affective learning, based on the unchanging values of what it is to be human from a more constructivist standpoint, piecing together how we might live well in the world.*** <sup>1</sup>

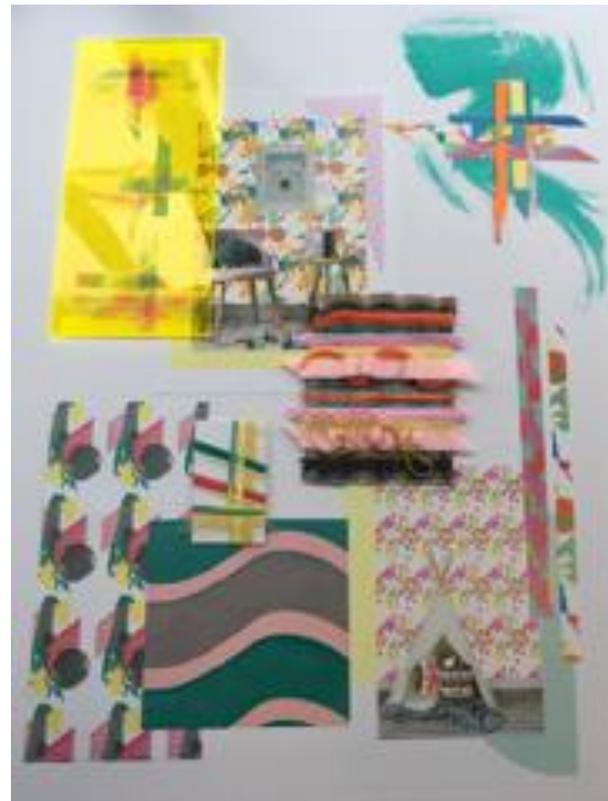
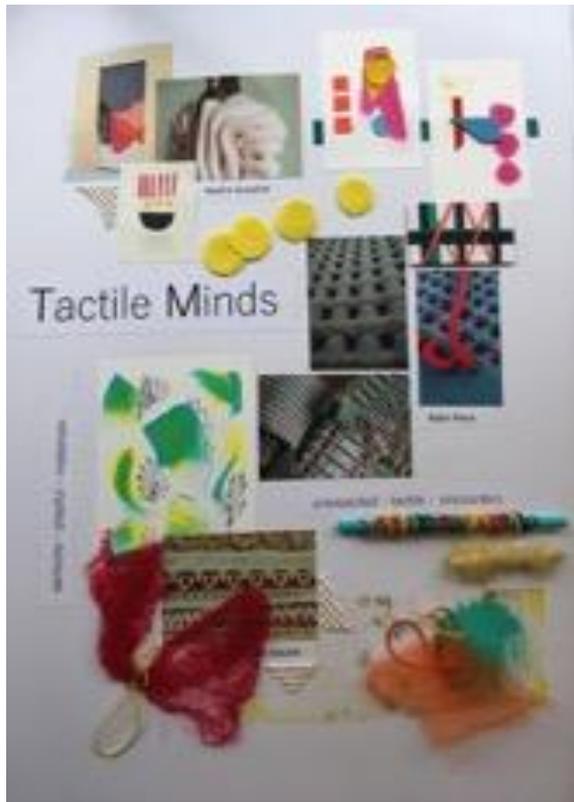
<sup>1</sup> Williams, D. (2016). Transition to Transformation in Fashion Education for Sustainability. In Leal Filho, W. and Brandli, L. (Eds.) Engaging Stakeholders in Education for Sustainable Development at University Level. World Sustainability Series, Springer International Publishing: Berlin





*Initial creative mapping exercises for concepts: Constructed Utopia (left) and Regenerated Vibrancy (right).*

<b>Group concept title</b>	<b>SDG</b>
<b><i>Tactile Minds</i></b>	3. Good Health & Wellbeing / 5. Gender Equality
<b><i>Living Framework</i></b>	9. Industry, Innovation & Infrastructure / 5. Gender Equality / 13. Climate Action
<b><i>Raw Anatomy</i></b>	5. Gender Equality / 15. Life on Land
<b><i>Constructed Utopia</i></b>	11. Sustainable Cities & Communities
<b><i>Regenerated Vibrancy</i></b>	5. Gender equality / 6. Clean Water and Sanitation / 12. Responsible Consumption & Production
<b><i>Full Immersion</i></b>	14. Life below Water
<b><i>Empowering Spaces</i></b>	5. Gender Equality / 11. Sustainable Cities & Communities
<b><i>Organised Chaos</i></b>	1. No Poverty / 5. Gender Equality
<b><i>Organic Manipulation</i></b>	14. Life below Water / 15. Life on Land



*Individual student work leading from 'Tactile Minds' group concept (weave & print)*



*Individual student work leading from 'Living Framework' group concept (weave & knit)*



*Individual student work leading from 'Interrupted Currents' group concept (CAD & knit)*



*Individual student work leading from 'Interrupted Currents' group concept (CAD & knit)*



*Individual student work leading from 'Breaking Boundaries' group concept (CAD & weave)*

# Findings & Discussion

Students enjoyed developing creative, practical outcomes led by SDGs, exploring design culture / theory & personal design interests – *challenging, meaningful directions and practical solution-led outcomes evident from submissions*

Wide range of SDGs selected: engagement with wide societal issues & consideration of how they could be addressed through textile design, *widening their understanding of practical textile applications.*

Collaborative team working encouraged development of key competencies for sustainable development - *critical thinking, creative problem solving, knowledge exchange* - whilst also strengthening key design fundamentals required to become effective textile design practitioners

# Contact

Lina Erlandsson, Education for Sustainable Development Coordinator

[lina.erlandsson@ntu.ac.uk](mailto:lina.erlandsson@ntu.ac.uk)

Angharad McLaren, Lecturer, Textile Design:

[angharad.mclaren@ntu.ac.uk](mailto:angharad.mclaren@ntu.ac.uk)

**Thanks! Any questions / comments welcome!**