# AUSTRALIAN TERTIARY LEVEL FASHION STUDENT UNDERSTANDING OF SUSTAINABILITY BASED ON THEIR FASHION EDUCATION

## **Authors**

Andrea Shabrokh, Dr.Carolina Quintero Rodriguez; School of Fashion and Textiles, RMIT University, Melbourne, Victoria, Australia

Corresponding Author: carolina.quinterorodriguez@rmit.edu.au

# **Keywords**

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#### **Abstract**

The fashion industry is wrought with environmental and social sustainability issues. In response, fashion education institutions are including ethics and sustainability focussed courses and topics within their tertiary level fashion courses. However, with academic literature indicating various definitions of ethics and sustainability in fashion, how it is understood and taught at each institution is likely to differ. Further, sustainability education within the fashion industry has been critiqued by various researchers for being too simplistic and not appropriately covering social justice issues. There is also a dearth in literature which analyses fashion student understanding of sustainability across multiple institutes and degrees. The aim of this research is to gain an understanding of the sustainability and ethics topics discussed in Australian tertiary level fashion courses, and student interpretation of ethics and sustainability in fashion.

Quantitative research was used to survey undergraduate and postgraduate fashion students from seven Australian education institutions. Questions were framed around what sustainability topics were covered throughout respondents' fashion studies, and their understanding of sustainability and ethics in a fashion context. Seventy-two per cent of respondents' courses included a specific ethics or sustainability related class. Human rights risk assessments and methods to improve worker rights were identified as the least covered sustainability and ethics-based topics within fashion courses. Reuse and the impact of transparency were identified as the most covered sustainability topics within fashion courses. Students also most associated waste reduction, transparency, and recycling and reusing with sustainable fashion. The term 'ethical fashion' was most associated with living wages, worker rights, and fair trade. The research findings indicate a distinction in sustainability education between environmental and social sustainability and a higher focus being placed on environmental sustainability over social sustainability within fashion education. These findings may prove useful for tertiary fashion educators and institutions in analysing, improving and developing their sustainable fashion curriculum.

#### Introduction

Decisions made by designers during a garment's design stage significantly influences a product's social and environmental impact (Armstrong and Lehew, 2011 cited in Lawless and Medvedev, 2015, p. 41). The same could be said about the impact of decisions made by workers in all areas of the fashion industry. Thus, fashion education institutions have the opportunity to provide upcoming workers in the fashion industry with the necessary skills and knowledge in sustainable and ethical fashion to have a positive impact on the fashion industry when entering the workforce (Murzyn-Kupisz and Holuj, 2021, p. 531; Radclyffe-Thomas et al., 2018, p. 89). To mitigate and address the negative social and environmental impacts of the fashion industry, education institutions worldwide have implemented sustainability curriculum into their fashion courses. For example, topics such as systems thinking, the circular economy, garment longevity, life cycle approach, zero waste, reuse and recycling, and traditional practices are covered across the Amsterdam Fashion Institute's Reality School (Hall and Velez-Colby, 2018, p. 15), in the Queensland University of Technology's, *Sustainability: The Materiality of Fashion* course (Payne, 2018, p. 4), and at various fashion education institutions in Poland (Murzyn-Kupisz and Holuj, 2021, pp. 540–558).

Despite an increase in sustainable and ethical fashion courses, there is a dearth in literature in which fashion students have been engaged to gauge their understanding of sustainability based on their fashion education. Further, with the terms 'ethics' and 'sustainability' often being used interchangeably (Khan, 2019, p. 1030), and being used to reference various initiatives and areas of focus, each institution's definition and education of how to implement the two terms within the fashion industry may differ. Therefore, the aim of this research is to gain an understanding of the sustainability and ethics topics discussed in Australian tertiary level fashion courses, and student interpretation of ethics and sustainability in fashion. In accordance with the study's aim, tertiary level fashion students in Australia were surveyed to identify the sustainability and ethics topics discussed in Australian tertiary level fashion courses, fashion student interpretation of ethics and sustainability based on their fashion education, and if there is an equal focus on social justice and environmental sustainability within Australian tertiary fashion education.

## **Literature Review**

## Sustainable and Ethical Fashion

The terms 'ethical' and 'sustainable' fashion are quite ambiguous and open to interpretation, with sustainable fashion and ethical fashion often being used interchangeably (Khan, 2019, p. 1030). A literature review of the two terms and their implementation within fashion, highlights cross over in how stakeholders, including fashion brands, consumers, and academics, define and implement the two terms.

Sustainability was defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" in 1987 by the United Nations Brundtland Commission (United Nations, n.d.).

Since then, within a fashion context, sustainability has been used to refer to a variety of practices. Garcia-Torres et al. (2022, pp. 356-358) identified a common view by fashion stakeholders, that traceability and transparency are required for sustainability. Thus, Garcia-Torres et al. (2022, p. 359) presents a model where sustainability, traceability and transparency are interconnected. Khan (2021, p. 848) explores the concept of sustainable fashion in a globalised world as requiring "solidarity and cultural brokerage across communities." The essays within Gwilt et al.'s (2019) book Global Perspectives on Sustainable Fashion, highlight varying definitions of sustainability worldwide. Aspects and definitions of sustainable fashion mentioned in the book include, the circular economy (Ruthschilling, 2019, pp. 2–13; Lewis and Loker, 2019, pp. 45–57); supporting local traditions that benefit the community (Anicet and Camargo, 2019, pp. 14–16); local production (Livini, 2019, pp. 25–27; Brydges, 2019, pp. 74–82); use of traditional techniques and closed loop production (Polo Florez, 2019, pp. 41– 43); recycling (Treptow-Kovacs, 2019, pp. 71–73); innovation and technology (Johnson, 2019, pp. 83–85); garment longevity (Gwilt and James, 2019, pp. 87–96); clothing rental (Min and DeLong, 2019, pp. 219–221); environmental sustainability (Smal, 2019, pp. 223-231); and incorporating indigenous knowledge in the creation of eco-textiles (Rugedhla et al., 2019, pp. 246–248). Finally, Radclyffe et al.'s (2018, p. 98) survey of Bachelor of Fashion Management and Bachelor of Fashion Marketing students at the London College of Fashion identified that participating students most associated sustainability with the environment, ethical values, and the importance of sustainability within the future fashion industry. Whilst all these descriptions of sustainable fashion differ slightly, the consideration of environmental and/or social impact is a common theme.

Whilst studies of ethical fashion also consider both environmental and social impact, definitions of ethical fashion tend to include a higher focus on social impact compared to sustainability definitions. Khan (2019, p. 1029) describes ethical fashion as valuing cultural commodities and viewing workers as creative, entrepreneurial and empowered. Cerchia and Piccolo's (2019, pp. 32–34) analysis of multiple fashion brands' codes of ethics, which reflect a brand's values and the principles which guide their behaviour, identified that worker rights, labour safety, bribery and anti-corruption, counterfeiting, and unfair business practices are common topics within codes of ethics. Cerchia and Piccolo (2019, p. 34) also noted a lack of focus on environmental protection in the codes of ethics. Reimers, Magnuson and Chao (2016, p. 394) identified a disconnect between academic definitions and consumer definitions of ethical fashion. Where academic definitions commonly identify ethical fashion as minimising negative impacts, consumer definitions of ethical fashion align with academic definitions and also include concepts such as fair and decent, being made with the right moral intentions, and being made in accordance with ideal industry standards (Reimers, Magnuson and Chao, 2016, p. 394). Blanchet's (2018, p. 382) study of ethical fashion runways highlights the varying definitions of ethical fashion used by organisers and the categorising of ethical fashion brands by their use of organic materials, natural materials, recycling, fashion that promotes expertise, fair fashion, and fashion that invests in social projects. Fair fashion focuses on the rights of workers and the values of dialogue, transparency, respect and equity, and paying workers a decent wage (Blanchet, 2018, p. 382). Finally, in Radclyffe et al.'s (2018, p. 98) study, the majority of student participants linked ethics with caring for the environment and humanity,

caring about animals, corporate social responsibility, and worker rights to a fair wage and unionisation. Whilst Radclyffe et al.'s (2018) study fills a gap left by the other studies mentioned by highlighting fashion student understanding of ethical and sustainable fashion, the study is limited as it only represents the experiences and views of students from one university in the United Kingdom.

## Sustainable Fashion Education

Radclyffe-Thomas et al. (2018), Gam and Banning (2020) and Kennedy and Terpstra (2017) have assessed student understanding of sustainability prior to, and following the incorporation of sustainability education within tertiary level fashion courses. Curriculum interventions focusing on sustainability and business ethics at the London College of Fashion between 2012 and 2016 were studied to gauge students' knowledge and interest in sustainability and ethics, students' opinions and values of sustainability, and the impact of responsible business education on students' intended practices within the fashion industry (Radclyffe-Thomas et al., 2018). Despite the London College of Fashion already having a high institutional focus on sustainability prior to the curriculum intervention, in a pre-intervention questionnaire, students reported a normal range of understanding of ethics rather than the expected higher range. Radclyffe-Thomas et al. (2018, p.99) suggested that this may be due to a lack of awareness or motivation by students to engage with existing educational resources or an inability to compare their educational experiences with those studying at other institutions. Gam and Banning (2020) conducted a pre- and post- survey of students taking Pattern Making and Product Development courses at a Midwestern University in the United States following the implementation of zero waste design project in the courses. The post-course survey indicated that through the zero-waste design project, students learnt about sustainable design, about the concept of zero-waste design, and were more aware of environmental issues surrounding apparel production (Gam and Banning, 2020, p. 158). Finally, Kennedy and Terpstra (2017) compared the student experiences of the 2008 and 2016 cohorts of the Bachelor of Fashion Design at Otago Polytechnic in New Zealand following sustainability and ethics in fashion education. From 2008 to 2016, there was a 15 per cent increase in the number of students with a strong level of awareness of sustainable practices within the fashion and apparel industry (Kennedy and Terpstra, 2017, p. 63). Both cohorts said they would incorporate sustainable approaches into design practice including sourcing sustainable fabrics, using natural fibres, considering garment life cycles, zero waste pattern making, ensuring ethical working conditions and avoiding using harmful chemicals and dyes. However, the 2016 cohort felt more strongly influenced by environmental and ethical issues when working as a fashion design student compared with the 2008 cohort (Kennedy and Terpstra, 2017, pp. 63-65). Whilst these studies all engaged fashion students to understand their experiences of sustainable fashion education, each study specifically focused on courses and sustainability interventions at one specific university rather than across multiple universities within a specific region. For example, the experiences of fashion students within Australia were not represented. Further, despite these studies indicating an increase in understanding of sustainability topics by students following sustainable curriculum interventions, various researchers have critiqued education institutions for how they implement sustainable fashion education within their courses.

Rissanen (2014, p. 207) critiqued fashion education institutions for only offering sustainability and ethics courses as electives, for not incorporating ethics and sustainability as a core element of fashion education, and for offering a simplistic understanding of solutions to ethical problems within the fashion industry. Reed et al. (2023, p. 6) called for fashion education to be taught from a social justice foundation, teaching from a lens of critical multiculturalism, feminism, antiracism, anti-ableism and decoloniality so that students are aware of the inequity and exploitation within the fashion industry. Teaching from a social justice foundation may include incorporating participatory action research where educators work collaboratively with colleagues and students to plan curriculums, design courses and reach desired outcomes by focusing on social change, and teaching through a people-centred approach (Reed et al., 2023, p. 7). This suggestion stems from an analysis that current fashion education mirrors societal norms and is informed by a "white, patriarchal, heteronormative, and capitalist lens" which neglects analysis of issues of ethnicity, class, and gender (Reed et al., 2023, p. 6). Payne explains that the overwhelming number of resources and discussions surrounding sustainable fashion can result in confusion. Therefore Payne (2018, p. 7) highlights the importance of including encounters and "active discussion of underlying politics and ethics at the heart" of fashion challenges in fashion education. Encounters include guest lectures, debates, and encouraging students to reflect on their personal connection to a social or ethical issue within fashion (Payne, 2018, p. 6). Murzyn-Kupisz and Holuj's (2021, p. 557) study on sustainable fashion education in Poland, identified that there is limited availability of sustainable fashion education texts in Polish, with the majority of up-to-date materials often being written only in English, creating a barrier to equal access to ethical fashion texts worldwide. However, these critiques and suggestions for improvement of sustainable fashion education were developed without directly engaging fashion students to gauge their understanding of sustainability and ethics based on their fashion education.

## Methodology

Fifty-four tertiary level undergraduate and postgraduate fashion students from seven Australian institutions participated in an online quantitative *Qualtrics* survey in accordance with RMIT Ethics Application 25734 approval. Participants were in at least their second semester of a tertiary level fashion course run by an Australian institution or graduated within one year of survey participation from a tertiary fashion course in Australia. Participants were at least 18 years old. Participation was not limited to any gender, sexuality, religious group or nationality. Students could be either domestic or international students.

The survey questions were developed based on literature review findings on ethical and sustainable fashion definitions and education. Participants were asked four demographics questions and five multiple choice questions focusing on sustainability and ethics education within their fashion courses and participant interpretation of the two terms. Participants were also able to provide written response explanations to their multiple-choice answers to the sustainability and ethics education questions. This allowed for qualitative data to support the quantitative data.

Participants were invited to participate in the survey via various methods. Lecturers and course co-ordinators of Australian fashion tertiary level courses were emailed or messaged via *LinkedIn* with information on the study, a Participant Information Sheet, and a request to pass on the online survey to their fashion students. Lecturer and course co-ordinator emails were found on tertiary institution websites. Posts requesting that students complete the survey were also posted on Australian fashion student *Facebook* pages, social media groups and *LinkedIn*. The researcher's relevant personal connections were also contacted via email or message with the same information provided in the social media posts. The survey did not ask participants for any identifying information other than if they were over 18 years old, the university they studied at, the course they studied, and the year of study they were currently completing or if they graduated within one year of taking the survey.

Following data collection, the data underwent statistical analysis to identify the most common sustainability and ethics topics covered in Australian tertiary fashion education, if students felt adequately prepared to implement sustainable and ethical practices in the workforce, and student interpretation of the two terms based on their fashion education. A relational analysis between the answers to questions asking what sustainability and ethics means to students was also conducted using *Qualtrics'* Stats IQ Relational tool.

# **Findings and Analysis**

Through analysis of 54 survey responses, key findings were identified relating to student understanding of sustainability and ethics based on their tertiary fashion education in Australia.

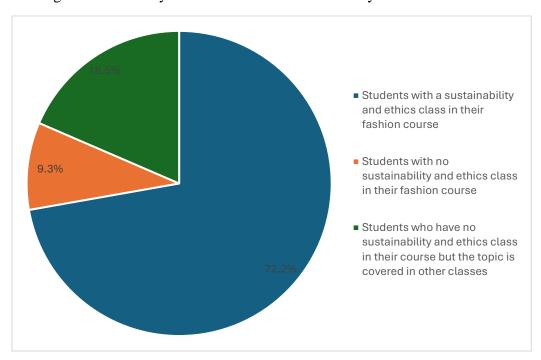


Figure 1. Specific ethics and sustainability classes in Australian tertiary fashion courses

As shown in Figure 1, 72 per cent of students had a specific ethics and sustainability class in their course. Of the 28 per cent who did not have a specific ethics and sustainability course, 33 per cent claimed that ethics and sustainability was covered in other classes. For the 77 per cent of the students who had a specific ethics and sustainability class in their fashion course, this class was a core class. When asked if they felt that the ethics and sustainability components in their fashion courses had properly prepared them for implementing sustainability and ethical initiatives in the workforce, 69 per cent of respondents selected yes. However, in the optional written explanation, various students explained that whilst their courses "provided a basic foundational knowledge for ethics and sustainability... [it] doesn't prepare for the practical implementation of... initiatives" and "there is still more to learn once you enter the real world."

Sustainability topics covered in fashion	Percentage of	Number of times
courses	students who	the option was
	selected the option	selected
Reuse	55.6%	30
Impact of transparency	44.4%	24
Minimal waste design	42.6%	23
Use of policies to encourage ethical and	38.9%	21
sustainable practices		
Life cycle assessments	37.0%	20
Living wages	35.2%	19
Biotextiles	24.1%	13
Human rights risk assessments and methods	22.2%	12
to identify risk of mistreatment of workers in		
supply chains		
How to improve worker rights	16.7%	9
All of the above	29.6%	16
We haven't covered any ethics or	5.6%	3
sustainability topics		
Other: please describe	1.9%	1
	Total Clicks	191

Table 1. Sustainability topics covered in Australian tertiary level fashion courses.

Students were provided with a list of nine sustainability and ethics topics and asked to select which topics had been covered in their fashion course. Students also had the option to select all of the above, other: please describe, and we haven't covered any ethics or sustainability topics. As displayed in Table 1, the most commonly covered ethics and sustainability topics in students' courses was reuse (56% students), impact of transparency (44% students) and minimal waste design (43% students). Comparatively, how to improve worker rights (17% students), human rights risk assessment and methods to identify mistreatment of workers in supply chain (17% students), and biotextiles (24% students) were the least covered topics. Approximately 30per cent of respondents chose the all of the above option.

Approximately six per cent of participants claimed that their course had not covered any ethics or sustainability topics.

What does sustainability in fashion	Percentage of students	Number of times the
mean to you? - choice options	who selected the option	option was selected
reduce waste	96.3%	52
transparency	92.6%	50
recycling and reusing	92.6%	50
implementing circular economy	88.9%	48
principles/closed loop production		
responsible purchasing practices	85.2%	46
using biotextiles and low impact	72.2%	39
textiles		
innovation and technology	66.7%	36
worker rights	63.0%	34
living wages	63.0%	34
fair trade	63.0%	34
positive impact on animals – vegan	59.3%	32
and vegetarian design		
local production and manufacturing	57.4%	31
rental and sharing economy	46.3%	25
use of traditional techniques/working	44.4%	24
with artisans		
systems thinking	44.4%	24
social enterprise	33.3%	18
no idea	0.0%	0
other: please explain	0.0%	0
	Total clicks	577

Table 2. What does sustainability in fashion mean to tertiary level fashion students at Australian institutions?

What does ethics in fashion mean	Percentage of students	Number of times the
to you? - choice options	who selected the option	option was selected
living wages	88.9%	48
worker rights	87.0%	47
fair trade	83.3%	45
transparency	75.9%	41
responsible purchasing practices	61.1%	33
reduce waste	53.7%	29
recycling and reusing	51.9%	28
local production and manufacturing	50.0%	27

social enterprise	48.1%	26
implementing circular economy	46.3%	25
principles/closed loop production		
using biotextiles and low impact	42.6%	23
textiles		
positive impact on animals – vegan	40.7%	22
and vegetarian design		
innovation and technology	35.2%	19
systems thinking	35.2%	19
use of traditional	33.3%	18
techniques/working with artisans		
rental and sharing economy	33.3%	18
no idea	1.9%	1
other: please explain	0.0%	0
	Total clicks	469

Table 3. What does ethics in fashion mean to tertiary level fashion students at Australian institutions?

Finally, students were provided with a list of terms related to sustainability and ethics identified through the literature review. Students were required to select from two identical lists, what sustainability and ethics meant to them. The list of terms associated with sustainability received a total of 577 clicks, with zero being on the no idea option (Table 2). The list of terms associated with ethics received 469 clicks, one of which was on the no idea option (Table 3). As displayed in Table 2, the three terms students most associated with sustainability were *reduce waste*, *transparency*, and *implementing circular economy principles/ closed loop production*, being selected by 96 per cent, 93 per cent and 93 per cent of students respectively. The least selected terms were *systems thinking*, *use of traditional techniques/working with artisans*, and *social enterprise*, each being selected by 33 per cent, 44 per cent and 44 per cent of students respectively.

Comparatively, when provided with the same list and asked what ethics in fashion means to them, the most commonly selected options were *living wages*, *worker rights*, and *fair trade*, being selected by 89 per cent, 87 per cent and 83 per cent of students respectively (Table 3). The least selected options were *rental and sharing economy*, *systems thinking*, and *use of traditional techniques/working with artisans*, all individually being selected by 33 per cent of students. Despite a distinction between how students think about ethics and sustainability, a significant number of students selected the same terms across both questions. Fifty-five per cent of those who selected *reduce waste*, 50 per cent of those who selected *implementing circular economy principles/closed loop production*, and 78 per cent of those who selected *transparency* in the question focusing on sustainability, selected the same term in the ethics question. Looking at the top three terms associated with ethics, 67 per cent who selected *fair trade*, 66 per cent who selected *worker rights*, and 65 per cent who selected *living wages* as terms related to ethics, selected the same term in the sustainability question. The similarities between how students defined sustainability and ethics in the multiple-choice questions, was

reflected in various optional explanations provided by students who explained that for them sustainability and ethics are "highly interdependent" where "sustainability is part of ethical fashion" and "considers environmental and social impact both."

## **Discussion**

How students are taught about sustainability and ethics can greatly influence how and if they implement sustainability and ethics practices when entering the fashion workforce. The survey results identified that the majority of participating students had a specific ethics and sustainability class in their tertiary level fashion course, 77 per cent of which were a core class. This finding does not support Rissanen's (2014, p. 207) critique of ethics and sustainability education in fashion courses being predominantly included as an elective course. However, despite 68 per cent of students indicating that they felt that their fashion course adequately prepared them for implementing sustainability and ethics initiatives when working in the fashion industry, the survey findings indicate that student knowledge in social justice may be limited. With human rights risk assessments and methods to identify risk of mistreatment of worker rights and how to improve worker rights being selected the least as topics covered in fashion courses, student understanding of how to identify and mitigate human rights issues within supply chains may be limited. This finding supports Reed et al.'s (2023, pp. 6–7) critique of fashion education for not teaching students through a social justice lens but instead being informed by societal norms in the western world. Therefore, if student interpretation of sustainability reflects what they are taught throughout their education, it can be inferred that their understanding of sustainability also has a lower focus on social justice.

The survey results indicated that students generally view sustainability as relating to environmentally friendly initiatives and transparency, and ethics relating more so to social justice and worker rights, aligning with the findings of the literature review. In particular, Treptow-Kovaks (2019), Ruthschilling (2019), Lewis and Loker (2019) and Smal's (2019) definitions of sustainable fashion including recycling, the circular economy, and environmental sustainability, align with student understanding of the term. Garcia-Torres et al.'s (2022, pp. 356-358) focus on the importance of transparency in relation to sustainability was also supported by the findings, with transparency sitting within the top four choices for both what sustainability and ethics meant to students. However, the findings also suggested that the two terms are very much interlinked and are 'highly interdependent', aligning with Khan's (2019, pp. 1029-1030) description of ethical and sustainable fashion as often being used interchangeably. Therefore, whilst each term has certain initiatives more associated with them than others, the findings indicate that students generally view both social justice and environmentally focused initiatives under the term sustainability. However, the findings also indicate that the term 'ethics' may not be used as frequently to describe social justice and environmentally friendly initiatives within tertiary fashion education. This is particularly evident when analysing the number of terms students associated with sustainability (577) compared to ethics (469) and the fact that the option no idea was selected by a student when being asked what ethics means to them based on their fashion education.

To ensure that fashion students are aware of both environmental and social justice initiatives which can help mitigate the negative impacts of the fashion industry, changes should be made to tertiary fashion education. It is suggested that tertiary fashion education institutions reflect on their current sustainable education curriculum to ensure that social justice topics such as how to identify and mitigate human rights risk, receive equal attention to more environmentally focused topics such as reuse and the circular economy. These changes may be implemented in accordance with Reed et al. (2023, pp. 6–7) and Payne's (2018, p. 6) suggestions of teaching from a social justice lens, implementing participatory action research, and encouraging students to reflect on their personal connection to ethical issues within fashion.

## **Conclusion**

Fashion student education on both environmental and social sustainability, is key to ensuring that future workers in the fashion industry are adequately equipped to implement sustainability initiatives when working in the fashion industry. Therefore, this study aimed to gain an understanding of the sustainability and ethics topics discussed in Australian tertiary level fashion courses, and student interpretation of ethics and sustainability in fashion. The study identified which sustainability topics are predominantly taught within tertiary level fashion courses in Australia and student understanding of the ethics and sustainability based on their fashion education. These findings may prove useful for tertiary fashion educators and institutions to assist them in analysing, improving and developing their sustainable fashion curriculum. As fashion students are the future of the fashion industry, fashion education must adequately address both social and environmental sustainability to enable students to positively contribute to the impact of the fashion industry on people and the planet.

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