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# Reimagining circularity: the eco-philosophical value of second-hand school uniforms in the UK

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**Abstract.** This study examines consumer resistance to the reuse value of the UK second-hand school uniform market, drawing on eco-philosophy and circular economy frameworks. Specifically, it examines how environmental knowledge, the 3R principle (reuse, reduce, recycle), cost saving, and perceived social norms shape attitudes toward reusage. A Google survey of parents, students, and community members provided quantitative data, which were used to connect three eco-philosophy frameworks and address gaps in the current understanding. This article examines the issue through three eco-philosophy frameworks, highlighting the need for stronger policies that promote the adoption of second-hand school uniforms. Further findings from case studies highlight that decision-making motivation, social norms, and incentives are central to participation. Overall, the study confirms that ecological ethics, school culture, and behavioral change collectively inform policies and environmental benefits of low-carbon lifestyles, enhancing sustainable uniform reuse in the UK.

**Keywords:** eco-philosophy, 3R, second-hand school uniform, circular economy

## 1. Introduction

### 1.1. Definition of eco-philosophy and circular economy

This article will explore the issue through the following frameworks, demonstrating why a stronger policy advocating the use of second-hand school uniforms should be implemented. Three research inquiries guide this argument. Firstly, ethical stewardship explanning how second-hand uniforms operationalize Leopold's land ethic [1] through reduced resourceF consumption and measurable decreases in textile waste and $CO_2$ emissions, and reflects core principles of eco-philosophy [2] by turning everyday consumption into an act of ethical stewardship. Secondly, system efficiency is connected to eco-efficiency through the application of MacArthur's (2013) system. Thirdly, cultural transformation, utilizing Stahel's life-extension paradigm (2019), is considered. Second-hand school uniforms provide an opportunity to create social, economic, and ecological value [3].

### 1.2. Second-hand school uniform background

The second-hand school uniform market in the UK has received increased attention due to growing concerns about sustainability, affordability, and social equity. Especially in private schools, following the Labour Party's election to power in 2024, the imposition of VAT on independent schools in the UK is expected to result in increased expenses for parents [4]. Secondary school uniforms come with a steep price tag, £266.14 for boys and £289.04 for girls [5]. The average school uniform costs £326 a year in state primary schools, which adds to the financial pressure on low-income families [6]. Cutting costs on school uniforms has become increasingly popular in the UK [7]. Usually, the cost of private school uniforms is significantly higher than that of state schools in the UK, such as Eton College and Harrow School, which are full boarding boys' schools. Billings and Edmonds (2025) showed that the total expense for uniforms for a new boy can range between £4,000 and £5,000. School uniforms put a particular strain on middle- and low-income families, who feel financial pressure, especially with the added VAT cost in the UK [8,9]. Consequently, an increasing number of British families are considering purchasing second-hand school uniforms to alleviate financial pressure. Parents and students are exploring alternative solutions to purchasing new uniforms [10].

Furthermore, the circular economy model can play a significant role in achieving SDG 12, as outlined by the United Nations [11]. SDG 12 promotes sustainable consumption and production by reducing resource use, improving efficiency, and advancing circular economy solutions globally. Significant circular economic action plans, such as those focusing on the 3R principle [12]

—reducing, reusing, and recycling [13] —remain in place for the second-hand school uniform market in the UK. The research goal is to raise awareness among parents and students about the benefits of saving money, practicing thrift, embracing a frugal spirit, and supporting a low-carbon lifestyle [14]. It also aims to highlight how school programs can influence and improve the management system for second-hand school uniforms.

By integrating these three dimensions—ethics, efficiency, and culture—this article demonstrates why the reuse of school uniforms should be more actively supported and embedded into eco-philosophy frameworks as a pathway toward sustainable social change in the following research questions.

## 2. Research method

This study employs both primary and secondary research methods to examine the circular economy of second-hand school uniforms, as illustrated in Figure 1 [15].

For primary research, a questionnaire designed by the author and aligned with the research aims was administered to approximately 166 respondents. The survey targeted parents, students, charity shop staff, school uniform manufacturers, and school employees, collecting structured data on attitudes, preferences, behaviors, costs, and economic factors related to second-hand school uniforms. The survey participants were recruited using a non-probability sampling method called snowball sampling. The remaining respondents were selected based on these referrals, with a focus on factors related to second-hand school uniforms. This study drew crucial reference from consumption among the teenage users. For secondary research, a wide range of academic references and reports were reviewed to provide sufficient support for the study's arguments. In particular, the paper incorporates two case studies from schools in the UK. The overall methodology follows the systematic approach outlined by Saunders, Lewis, and Thornhill (2012), involving the identification, selection, processing, and analysis of both qualitative and quantitative data to draw meaningful conclusions (see Figure 1). The questionnaire's structure is in Table 1.

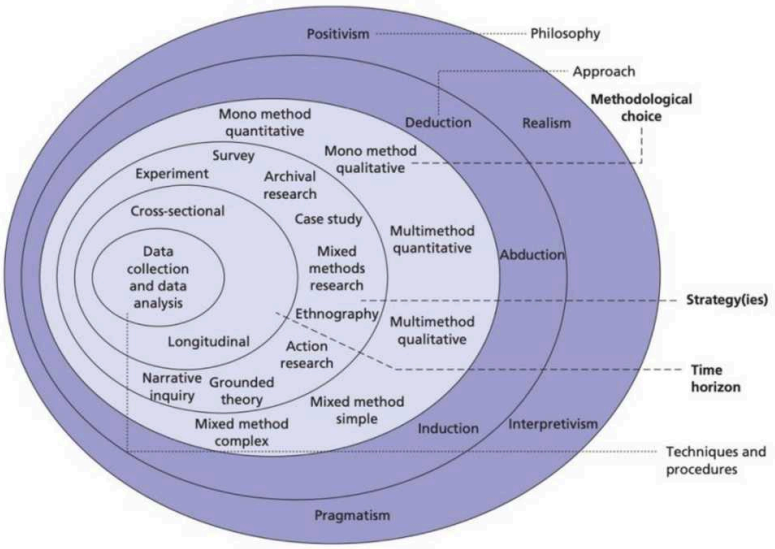


**Figure 1.** Research 'Onion' (Saunders, Lewis, and Thornhill, 2012)

**Table 1.** Questionnaire structure

| Theme | Key Questions |
|---|---|
| Demographics | Gender, Age, Nationality, Occupation, Household income level. School BackgroundType of school (state, private, special education), school commu-nication on second-hand uniforms. |
| Purchase Behavior | Experience of buying second-hand uniforms in the past 3 years, purchasing channels (school shop, online, charity shop, peer-to-peer). |
| Motivations and Barriers | Reasons for buying (cost-saving, sustainability), reasons for not buying (hygiene concerns, fit issues, limited availability). |
| Savings and Cost Factors | Estimated yearly savings from purchasing second-hand uniforms. |
| Donation and Recycling | Attitudes toward donating uniforms, knowledge of the 3R principle- principles, perceived barriers, and opportunities for second-hand uniforms. |
| Upcycling and Sustainability | Opinions on upcycling uniforms as a fashion trend, support for Initiativesschool initiatives promoting a low-carbon lifestyle through reuseand redesign. |

## 3. Lecture reviews

### 3.1. Theoretical framework of eco-philosophy and environmental benefits

Ecocentrism is an ethical perspective that places intrinsic value on all elements of the natural world, including both living and non-living entities. Unlike anthropocentrism, which prioritizes human needs, ecocentrism emphasizes that ecosystems, species, and natural processes deserve respect and protection in their own right.

It is highly relevant to eco-philosophy because it challenges society to move beyond short-term, human-centered approaches to environmental issues. From an ecocentric standpoint, environmental protection is not optional or secondary but a moral responsibility. This perspective advocates for more substantial commitments to sustainability, demanding practices and policies that safeguard the health, integrity, and longevity of ecosystems for both current and future generations. Raising awareness is insufficient unless accompanied by practical conditions that enable ethical and behavioural change [16]. The principle of recyclability, popularized in the Cradle to Cradle book [17]. Cradle to Cradle emphasizes eco-effective design: eliminating waste by treating materials as nutrients, using renewable energy, valuing diversity, and creating closed-loop systems where products continually cycle without harming ecosystems. Another research also highlights this need by framing waste as a design flaw and positioning reuse as an essential pathway toward sustainability [18].

Within this context, perceived social norms have emerged as the most influential factor shaping consumer behaviour. Research indicates that social approval and environmental cues exert greater influence on reuse decisions. Vîrlan and Ratnaweera (2025) further argue that reuse behaviour is primarily shaped by collective pressures and contextual signals, with social proof outweighing personal attitudes [19]. In particular, consumers' concerns cluster around purchasing second-hand school uniforms, focusing on product quality, convenience, trust, and peer influence. These concerns underscore that individual choices are not made in isolation but are significantly influenced by community expectations. Bridging this to a broader perspective, it becomes evident that advancing uniform reuse cannot be achieved solely through ecological ethics or systemic design improvements. Instead, sustainable change also depends on embedding reuse within everyday culture—by normalizing the practice and establishing supportive social norms that make second-hand uniforms a respected and attractive option for families.

From an ecological standpoint, in Table 2, Leopold's ethic views natural resources as a communal trust, emphasizing moral responsibility toward ecosystems. MacArthur's systems lens quantifies ecological benefits, such as an estimated 80% reduction in the textile sector's carbon footprint, through circular practices. Design in school uniforms is often static, with limited innovation once a style is implemented. This uniformity creates challenges for the reuse of second-hand school uniforms because durability, adaptability, and reusability are rarely prioritized at the design stage. Stahel's perspective reframes waste not as an unavoidable by-product but as the outcome of poor design choices. Applied to school uniforms, this means that if garments were designed with longevity, adjustability (e.g., adjustable sizing), and recyclability in mind, much of the textile waste currently generated could be prevented, and more second-hand school uniforms will be reused. In terms of the economic dimension, Leopold warns against the cost of overconsumption and depletion. The MacArthur Foundation illustrates tangible household benefits, estimating 30–50% cost savings through reuse and recycling models. Stahel advances the principle of value retention via longevity, showing how repair, reuse, and refurbishment keep materials in circulation and preserve their economic value. Leopold emphasizes intergenerational responsibility, while MacArthur advocates for community redistribution hubs to democratize access. Stahel, meanwhile, emphasizes cultivating a culture of maintenance. Finally, on a systemic level, Leopold

positions humans as members of ecosystems, MacArthur envisions industrial metabolic cycling, and Stahel integrates technical loops and behavioural change, linking human action to systemic resilience.

**Table 2.** Description of three philosophy frameworks

| Dimension | Leopold's Ethics | MacArthur's Systems | Stahel's Praxis |
|---|---|---|---|
| Ecological | Resources as communal trust | 80%↓ textile carbon footprint | Waste = design failure |
| Economic | Cost of overconsumption | 30-50% household savings | Value retention via longevity |
| Social | Intergenerational responsibility | Community redistribution hubs | Culture of maintenance |
| Systemic | Humans as ecosystem members | Industrial metabolic cycling | Technical loops + behavior |

Several studies have examined the economic and environmental benefits of the second-hand market, particularly through clothing resale platforms and sustainability initiatives. These studies demonstrate how resale reduces textile waste, lowers household expenses, and extends the lifespan of garments, thereby directly supporting sustainable consumption goals. Theoretical frameworks from behavioural economics [20] further explain consumer behaviour in this context. For example, the endowment effect helps to clarify why families may hesitate to donate or resell uniforms, valuing them more simply because they own them. Loss aversion sheds light on why some consumers resist second-hand purchases, perceiving risks in quality or social acceptance as greater than potential savings. Meanwhile, social proof illustrates how visible peer participation in reuse programs can normalize and encourage second-hand buying. Together, these insights are highly relevant because they link practical barriers and motivations to underlying psychological mechanisms, offering a more complete understanding of what drives or hinders participation in uniform reuse schemes [21-23]. In particular, studies indicate that second-hand markets significantly reduce the textile waste and carbon footprint of adolescents and Generation Z. Generation Z (GZ) refers to people born between 1997 and 2012. A low-carbon lifestyle can alleviate financial pressure on families, particularly for low-income households. Consumers often face psychological barriers such as stigma, perceived quality issues, and online purchase weakness, which can limit participation [24]. The current situation is that Schools play a critical role in normalizing the use of second-hand uniforms. Community-based programs and government policies can further influence behavioural shifts [25,26].

### 3.2. Preview research on the circular economy

The circular economy mitigates resource deficits by promoting sustainable economic practices. An outcomes-based approach defines the circular economy as "an economic model designed to meet human needs and equitably distribute resources while preserving ecological balance and avoiding transgressions of planetary boundaries" [27]. The European Commission has identified key points, such as "Higher and sustained improvements of resource efficiency performance," that necessitate maintaining the added value of products for extended periods and minimizing waste generation [28] . Reuse and recycling regulations vary from country to country, with some nations mandating that only authorized agencies are permitted to repurpose waste. In contrast, others permit recycling procedures that the government does not directly control [29]. Reduction involves minimizing waste through product repairs and other policies that discourage the use of disposable items, such as single-use plastics [30]. In second-hand marketplaces, the refurbishment of digital equipment and the maintenance of its functionality through inspections and repairs are all part of the concept of rehabilitation. A significant part of recycling is disassembling, sorting, and reusing materials for new manufacturing procedures [31]. A successful case study on working with suppliers to reuse and recycle old uniforms at a Leeds school, as featured on YouTube [32]. In the discussion (Part 4), the butterfly diagram module will provide a detailed explanation of the Leeds School's case.

## 4. Survey results and discussions

### 4.1. Core survey findings in the chart

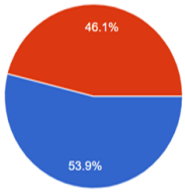


**Figure 2.** Gender

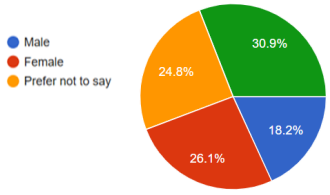


**Figure 3.** Age

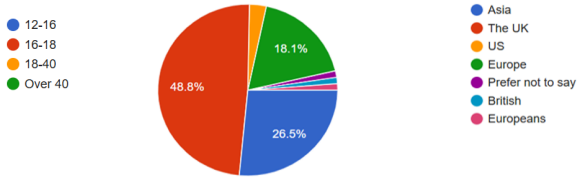


**Figure 4.** Region


**Figure 5.** What type of school is your or your children's educational background


**Figure 6.** What is your occupation

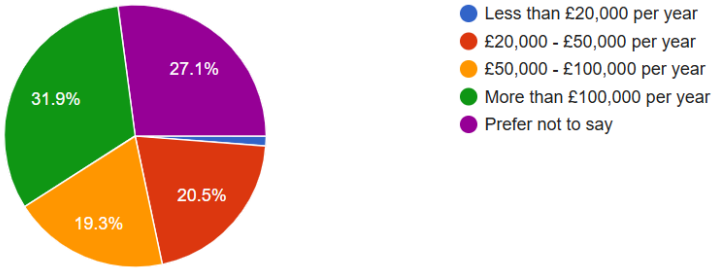


**Figure 7.** What is your family's household income level or yearly salary after taxes


**Figure 8.** Have you ever purchased a second-hand school uniform in the past 3 years

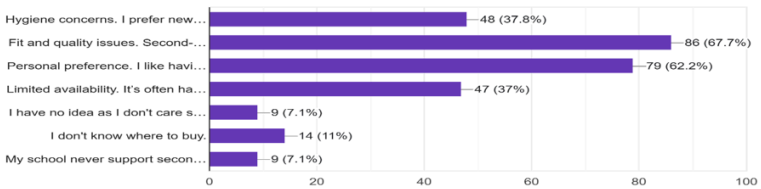


**Figure 9.** For whoever chooses no, please answer: Why do you not purchase second-hand school uniforms? You can choose from more options

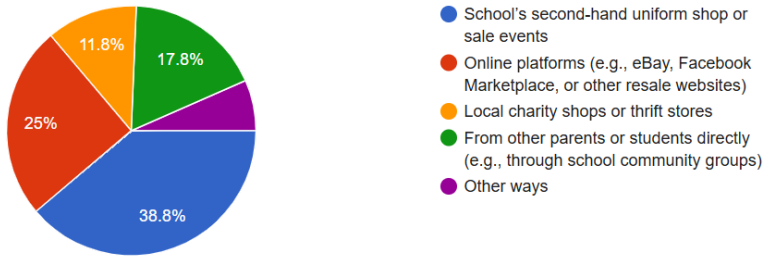


**Figure 10.** Where do you usually buy second-hand school uniforms

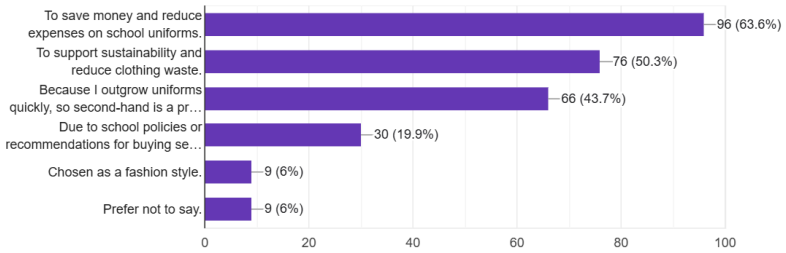


**Figure 11.** Why do you buy second-hand school uniforms? You can choose from more options

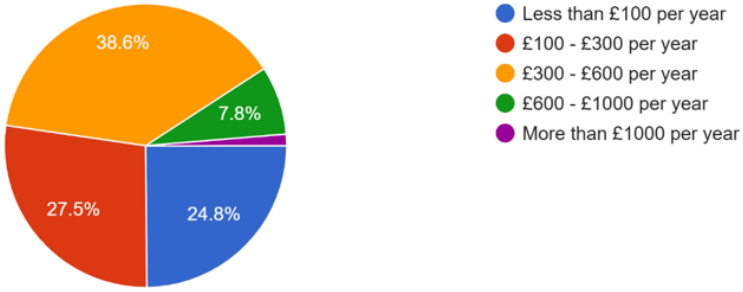


**Figure 12.** How much do you save to buy second-hand school uniforms yearly


**Figure 13.** Do you know how to buy second-hand school uniforms


**Figure 14.** Does your school send emails or letters to you to buy second-hand school uniforms

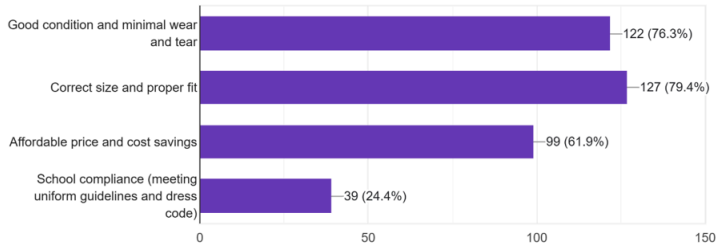


**Figure 15.** Which feature do you consider when buying second-hand school uniforms


**Figure 16.** What is your attitude towards donating your school uniform


**Figure 17.** Do you think schools are the leading influence on parents and students regarding second-hand school uniforms

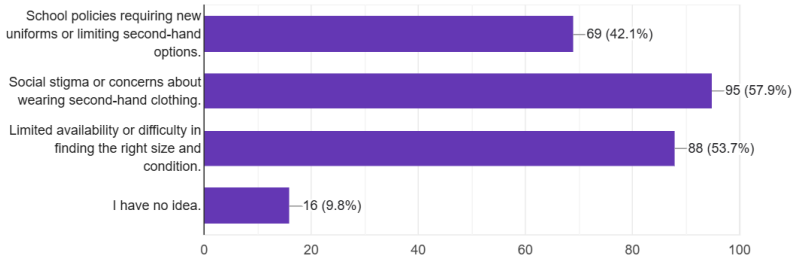


**Figure 18.** What do you think is a barrier to second-hand school uniforms

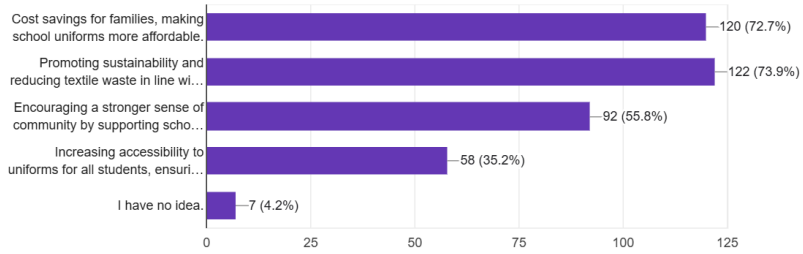


**Figure 19.** What do you think is an opportunity to second-hand school uniforms


**Figure 20.** Do you know the rules of the 3R process for second-hand school uniforms in the UK

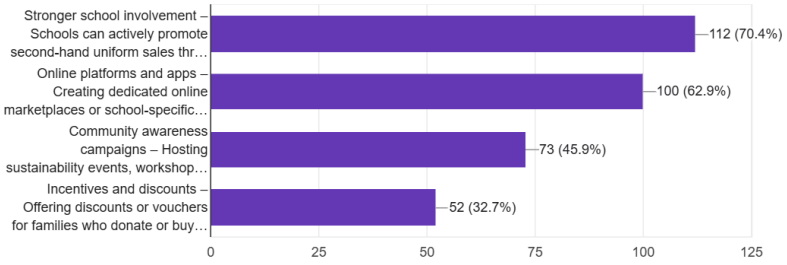


**Figure 21.** Do you think there is a way to improve second-hand school uniform marketing in the UK? You can choose from more options


**Figure 22.** Do you think redesigning or upcycling second-hand school uniforms could create a new fashion trend among adolescents & the GZ group in the UK

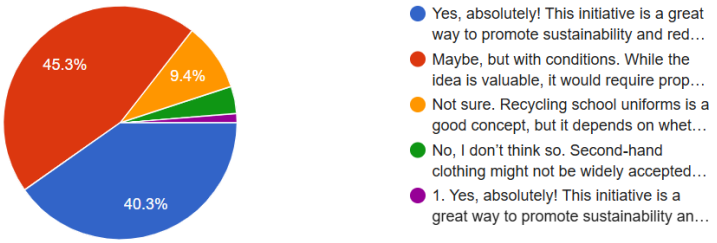


**Figure 23.** Would you support a school initiative promoting environmental protection and a low-carbon lifestyle by upcycling second-hand school uniforms, including rules and resource support

53.9% of respondents were male and 46.1% female in Figure 2, while the majority were teenager and their parents (Figure 3), In terms of nationality, local UK citizens accounted for 48.8%, followed by respondents from Asia (26.5%) 8 (Figure 4). Most participants came from private schools (48.6%) or state schools (25.3%) (Figure 5), and the main occupations were students (46.7%) and parents or guardians (40.6%) (Figure 6). Household income distribution (Figure 7) suggests that middle- and high-income families are well represented, consistent with 71.3% of participation in private schooling and 25.3% in state school.

4.1.1. Motivation to buy second hand school uniforms

Nearly 37% of respondents bought second-hand uniforms in the past three years (Figure 8), while 23.6% had considered doing so. Figure 11 highlights that saving money (63.6%), environmental sustainability (50.3%) are the main drivers for buying second-hand uniforms. in Figure 12, most families reported savings between £100 and £600 annually from buying second-hand uniforms. Respondents typically purchased these items from school-organized shops or sale events (Figure 10).

4.1.2. Barriers

fit and quality issues (69.1%), personal preference for new clothing (67.7%), and hygiene concerns (37.8%) are the primary barriers (Figure 9). Social stigma and school policies requiring new uniforms are also significant constraints, with 57.9% and 42.1% of respondents citing these barriers, respectively (Figure 18). Communication gaps were evident: 37.3% of respondents reported never receiving school communications about second-hand options (Figure 14). Buyers most valued correct sizing, good condition, and affordability when considering purchases (Figure 15).

4.1.3. Opportunities and school influence

Donation behavior appears underdeveloped: almost half of respondents were willing but had not donated (Figure 16), indicating untapped potential to expand second-hand supply. Most participants agreed that promoting sustainability (73.9%), cost savings (72.7%), and stronger community ties (55.8%) are key opportunities for the market (Figure 19). However, only 31.7% considered schools as the main influence on uniform purchasing decisions, while many perceived individual or family factors as more important (Figure 17). Awareness of the 3R rules is limited, with only 15.9% fully understanding them (Figure 20), suggesting a need for education campaigns.

4.1.4. Upcycling and future trends

42.7% considered it possible but conditional on appealing designs and marketing support (Figure 22). 40.3% particular think Upcycling and redesigning second-hand school uniforms could inspire a unique and sustainable fashion trend among adolescents and the GZ group in the UK in figure 23.

4.1.5. Motivation-related relationship of the three eco-philosophy frameworks in table 3

**Table 3.** The types of schools and the features considered in second-hand school uniforms

| School type | Percentage of know how to buy second hand school uniform | Which feature do you consider when buying second-hand school uniforms? | | | |
|---|---|---|---|---|---|
| | | Affordable price and cost saving | Correct size,Good condition | Good condition and minimal wear and tear | School compliance(meeting uniform guidelines and dress code |
| State | 73.81% | 7.14% | 11.90% | 80.95% | 0.00% |
| Private | 73.45% | 6.19% | 15.04% | 73.45% | 5.31% |
| Special education | 75% | 0% | 0% | 100% | 0% |

Table 3 shows that over 70% of participants already know how to purchase a second-hand school uniform, with a particular emphasis on good condition and minimal wear and tear. This reflects Leopold's Ethics, where clothing is treated as a shared resource entrusted to the community, and where attention to comfort and durability demonstrates an intergenerational responsibility to maintain quality for future users.

From the perspective of MacArthur's Systems, the strong preference for "good condition" uniforms highlights how waste is reduced through circular design and redistribution hubs, enabling schools and charity shops to act as platforms for circulating garments. By prioritizing durability, second-hand uniform schemes contribute to reducing the textile sector's carbon footprint and reinforce the systemic cycling of materials within local communities.

In line with Stahel's Praxis, consumers' motivations—driven more by condition and longevity than by strict dress code compliance (only 5.31% of private school respondents)—demonstrate a growing culture of maintenance and recognition that waste is a design failure. The demand for well-preserved uniforms encourages schools and retailers to extend the lifespan of garments, retain their value, and strengthen technical loops of reuse.

Together, these findings align with Research questions 2, showing that understanding consumer motivations creates opportunities for schools and charity shops to update management systems, ensuring that donation, redistribution, and resale strategies support ecological, economic, and social sustainability.

4.1.6. Income-related relationship of the three eco-philosophy frameworks in table 4

**Table 4.** Family's household income level, knowledge of 3R level, and saved money account to buy second-hand school uniform

| Family household income level | Percentage of know 3R | Saved money <100 | Saved money 100-300 | Saved money 300-600 | Saved money 600-1000 | Saved money >1000 |
|---|---|---|---|---|---|---|
| <20K | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| 20-50K | 35.29% | 8.82% | 26.47% | 58.82% | 5.88% | 0.00% |
| 50-100K | 25.00% | 6.90% | 24.14% | 48.28% | 20.69% | 0% |
| >1000 | 9.43% | 50.00% | 38.64% | 0% | 6.82% | 4.55% |
| Prefer not to say | 2.22% | 20.45% | 20.45% | 56.82% | 2.27% | 0% |

35.29% of respondents are familiar with the 3R (Reduce, Reuse, Recycle) concept of circular economics, and their household income levels fall between £20,000 and £50,000. This group also achieved the greatest savings from purchasing second-hand school uniforms, while households earning under £20,000 were generally unaware of the 3R concept and reported the lowest savings, under £100. This highlights the importance of targeted awareness programs—particularly for low-income families who may benefit most from savings but currently lack knowledge of 3R.

From the perspective of Leopold's Ethics, this highlights the role of environmental awareness as an intergenerational responsibility: families who recognize the communal value of resources (through the 3R approach) are more likely to adopt sustainable practices and benefit economically, while the least aware groups remain excluded from both savings and ecological gains.

In terms of MacArthur's Systems, the findings reinforce how knowledge of circular principles enables households to participate in community redistribution hubs and achieve household savings of 30–50% through reuse. The lack of awareness in lower-income households highlights a systemic gap that can be addressed through targeted education, thereby ensuring equitable access to the benefits of circularity.

According to Stahel's Praxis, the connection between awareness and savings illustrates the principle of value retention via longevity: uniforms reused within technical loops extend their lifecycle and preserve economic value for families.

### 4.2. Discussion: case studies, butterfly module analysis in figure 23

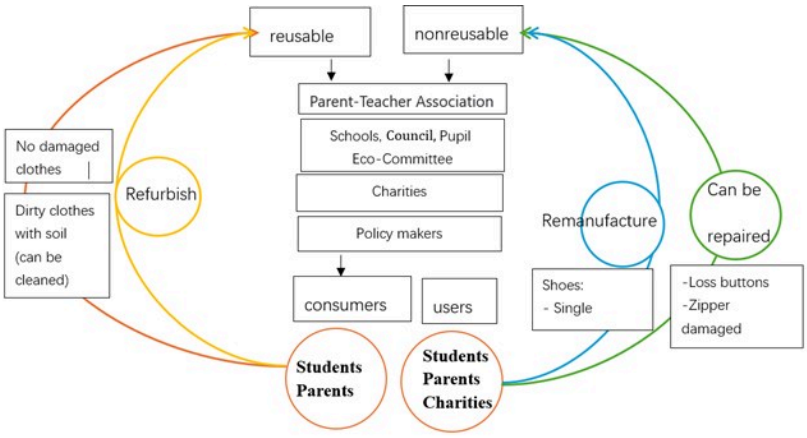


**Figure 24.** Butterfly module on second-hand school uniforms( created by author)

Two case studies in Figure 24, from the Leeds School and the Scottish School, illustrate how targeted policy changes can transform outcomes when guided by eco-philosophy. By circulating uniforms year-round, promoting availability through newsletters and online platforms, and encouraging families to donate even damaged items for repair or repurposing, the Parent-Teacher-Association (PTA) can help parents and students become involved in the donation and volunteer system. The school has integrated sustainability into its everyday practices, rather than leaving it as an abstract ideal.

Leopold's Ethics is reflected in how reuse is framed as an act of intergenerational responsibility. Students and parents actively sustain resources within the community, treating uniforms as part of a shared ecological trust rather than disposable goods. This moral framing strengthens collective buy-in and ensures higher donation rates.

MacArthur's Systems lens highlights the school's success in creating a community redistribution hub. Uniforms remain in circulation for longer, which not only reduces carbon emissions from new production but also delivers tangible household savings—outcomes that demonstrate how systemic thinking can align environmental and economic benefits.

Stahel's Praxis is evident in the repair and repurposing of damaged items. By patching or recycling uniforms, Leeds normalizes circular behaviors and demonstrates that waste is not inevitable but a design failure that can be corrected. The outcome is a visible cultural shift where pre-loved clothing retains functional and social value, reducing stigma around reuse.

The Scotland school case [33] shows how these principles can be scaled further. By extending reuse beyond uniforms to lunch boxes, bottles, and backpacks, and distributing them through parent-run units, uniform banks, and volunteer networks, the initiative broadens community engagement and multiplies sustainability impacts. These examples demonstrate that eco-philosophy-driven policies can reshape school practices, influence cultural norms, and deliver measurable environmental and financial outcomes.

## 5. Discussion: problem and opportunity from the eco-philosophical framework

The survey results and identified problems can be interpreted through three eco-philosophical perspectives that validate both the challenges and proposed solutions.

Leopold's Ethics positions school uniforms as a communal trust and highlights the moral responsibility of students, parents, and schools to manage these resources across generations. The data showing that many families avoid second-hand uniforms due to stigma, poor fit, or low quality illustrates a gap in fulfilling this responsibility. Schools, as social institutions, therefore play a crucial role in overcoming stigma by setting clear standards for condition, sizing, and compliance, and by actively promoting reuse through newsletters, eco-committees, and parent-teacher associations. This approach transforms uniform reuse into an act of intergenerational stewardship that supports community resilience.

MacArthur's Systems lens demonstrates the potential of circular practices to achieve an 80% reduction in textile emissions and 30–50% household savings. The finding that over half of respondents are motivated by saving money and reducing waste underscores the alignment between circular systems and household economic behavior. However, barriers such as insufficient school communication (reported by 37.3% of respondents) reveal that systemic structures are not yet fully in place. The proposed

solution of developing school-led redistribution hubs—through offices, online platforms, and parent-run shops—creates a systemic infrastructure to keep uniforms in circulation, reduce carbon footprints, and maximize financial savings.

Stahel's Praxis views waste as a design failure and emphasizes value retention through longevity. The survey confirms this perspective, as 33.1% of respondents expressed interest in upcycling and redesigning uniforms, and 40.3% supported school initiatives to encourage creativity. These findings suggest that poorly managed donation systems are not inevitable but represent design flaws in current practices. Solutions such as repair workshops, refurbishment programs, and upcycling projects embody Stahel's concept of technical loops and a culture of maintenance, extending the life of uniforms while transforming waste into opportunities.

## 6. Conclusion

Taken together, these eco-philosophical perspectives demonstrate not only why circularity [34] benefits the economy but also how schools can drive this transformation in practice. The barriers often cited—stigma, weak communication, limited policy, and low awareness of 3R—should instead be seen as opportunities for schools to intervene and lead.

By applying Leopold's ethics of stewardship, schools can reframe uniforms as shared resources within a communal trust. Through MacArthur's systems approach, they can function as redistribution hubs, keeping garments in circulation and reducing the demand for new production. Stahel's praxis of longevity reinforces this by showing that waste is a design failure, highlighting the role of repair, upcycling, and durability in maximizing the lifespan of uniforms.

The survey results further underline that schools are uniquely placed to influence household decisions. Families are motivated by cost savings, fit, and quality—but when second-hand uniforms meet these criteria, there is no downside. They reduce waste, save money, and normalize sustainable consumption.

The case studies provide clear evidence of how this can be achieved: through strong PTA involvement, donation systems, community-led distribution networks, and policies that embed reuse into the school culture. Together, they demonstrate that schools are not passive institutions but active catalysts of circular economy practices for the environment [35].

## 7. Limitations and suggestions

The diversity of participants may limit the study's findings; there is no group under 12 years old. Additionally, one question did not use skip steps; this may lead to a misunderstanding of the reasons why people do not purchase second-hand school uniforms. There are not enough tax police documents on second-hand school uniforms from the UK parliament.

Future research should expand the sample diversity to over 200, include an over-6-year-old group, use a skip step to correlation and association questions in a Google survey, explore long-term impacts, develop adaptable models, assess policy influence, involve a survey participant from the UK parliament, and involve more stakeholders to enhance the scalability and effectiveness of sustainable practices.

## References

[1] Norton, B. G. (1988). The constancy of Leopold's land ethic. *Conservation Biology*, 2(1), 93–102.
[2] Hategan, V. P. (2021). Promoting the eco-dialogue through eco-philosophy for community. *Sustainability*, 13(8), 4291.
[3] Smith, W., & Gough, A. (2015). Deep ecology as a framework for student eco-philosophical thinking. *Journal of Philosophy in Schools*, 2(1).
[4] Macey-Dare, R. (2024). Ramsey, Ramsay, Schelling and Starmer+ VAT and the optimal provision, taxation, subsidization and suppression of UK private and state school education.
[5] BMG Research. (2024).Cost of school uniform survey 2023 [Website].https: //assets.publishing.service.gov.uk/media/677ea36522a085c5ff5c04db/Cost_of_school_uniform_survey_2023
[6] This Morning. (2024). How to save money on school uniforms [Video]. This Morning.https: //youtu.be/Na-dGztp3UU?si=zL_pam9DEXgIFU88
[8] Billings & Edmonds. (2025). Harrow School [Website].https: //www.billingsandedmonds.co.uk/our-schools/harrow-school
[9] Billings & Edmonds. (2025). Starting at Eton College [Website].https: //www.billingsandedmonds.co.uk/starting-at-eton-college
[10] Richmond, T., & Regan, E. (2023). Private matters.
[11] ECE. (2017). Economic and Social Council [Website].https: //unece.org/fileadmin/DAM/ceci/documents/2017/ICP/TOS-ICP/ECE.CECI.ICP.2017.2.e.pdf
[12] Manickam, P., & Duraisamy, G. (2019). 3Rs and circular economy. In *Circular economy in textiles and apparel* (pp. 77–93). Woodhead.
[13] Circulartech. (2025).Module 3: Defining the circular economy of digital devices [Website].https: //circulartech.apc.org/books/a-guide-to-the-circular-economy-of-digital-devices/page/module-3-defining-the-circular-economy-of-digital-devices
[14] McRobbie, A. (1989). Second-hand dresses and the role of the rag market (pp. 23–49). Palgrave Macmillan UK.
[15] Saunders, M., Lewis, P., & Thornhill, A. (2006). *Research methods for business* (4th ed.). Pearson Education.
[16] Rydén, L., Leal Filho, W., Skubala, P., & Kronlid, D. (2003). Behaviour and the environment: Ethics, education, and lifestyle.

[17] Braungart, M., & McDonough, W. (2009). *Cradle to cradle*. Random House.
[18] Peterson, M. (2004). Cradle to cradle: Remaking the way we make things. *Journal of Macromarketing*, 24(1), 78–79.
[19] Vîrlan, N., & Ratnaweera, D. V. R. (2025). The role of sustainable consumption knowledge and self-efficacy in overcoming resistance to reuse: A social cognitive perspective.
[20] Hursh, S. R. (1984). Behavioral economics. *Journal of the Experimental Analysis of Behavior*, 42(3), 435–452.
[21] Camerer, C. F. (2011). Behavioral game theory: Experiments in strategic interaction. Princeton University Press.
[22] Norris, L. (2012). Trade and transformations of second-hand clothing: Introduction. *Textile*, 10(2), 128–143.
[23] Hobbs, R. (2016). Understanding the influencers of second-hand apparel shopping behavior.
[24] Calvo-Porral, C., Orosa-González, J., & Viejo-Fernández, N. (2024). Barriers to online second-hand purchase behavior. *Marketing Intelligence & Planning*, 42(2), 213–233.
[25] Bakker, C., & Mugge, R. (2017). Plate product lifetimes and the environment. *2017 Conference Proceedings*, 8, 319.
[26] Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological Review*, 94(1), 3.
[27] Gladek, E. (2019). The seven pillars of the circular economy. *Metabolic*. https: //www.metabolic.nl/news/the-seven-pillars-of-the-circular-economy
[28] European Commission. (2014). *Towards a circular economy: A zero waste programme for Europe*. https: //eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52014DC0398
[29] Madaan, G., Singh, A., Mittal, A., & Shahare, P. (2024). Reduce, reuse, recycle: Circular economic principles, sustainability, and entrepreneurship in developing ecosystems. *Journal of Small Business and Enterprise Development*, 31(6), 1041–1066.
[30] Coddington, W. (1993). Environmental marketing: Positive strategies for reaching the green consumer. Mc-Greenhill.
[31] Chen, X. J., & Fang, G. (2019). Analysis on green marketing strategy of clothing firm: Take H&M for example. In *Proceedings of the 2019 International Conference on Management Science and Industrial Engineering* (pp. 146–150).
[32] Leeds. (2022). *Leeds School Uniform Exchange - An innovative way of diverting good quality school clothes from the bin and back into the hands of local families!* [Video]. Leeds. https: //www.youtube.com/shorts/BUZRjcxuUmQ
[33] Connect. (2024). *School uniform and clothing banks* [Website]. Connect Scottish Parent Teacher Council. https: //connect.scot/resources/school-uniform-and-clothing-banks
[34] MacArthur, E. (2013). Towards the circular economy. *Journal of Industrial Ecology*, 2(1), 23–44.
[35] Mazur-Wierzbicka, E. (2021). Circular economy: Advancement of European Union countries. *Environmental Sciences Europe*, 33, 1–15.

## Appendix

Google Survey linking:
https://docs.google.com/forms/d/e/1FAIpQLScwCnGqpIsBAhDMgeQc2Kod3sXwGi9JZATYyzCrJ40hKy9tYw/viewform?usp=header