

Exploring Parental Engagement in Sustainable Practices for School Uniforms: A Circular Economy Perspective

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Introduction

The transition to a circular economy (CE) offers transformative solutions for mitigating the environmental, economic, and social challenges posed by the traditional linear 'take-make-dispose' model (Gorokhova et.al., 2023). This study investigates the integration of CE principles within the school uniform sector, focusing on parental behaviour, drivers, and barriers in purchasing school uniforms. The research aims to provide actionable recommendations for schools to enhance sustainability and reduce textile waste.

Parental attitudes towards sustainability in school uniforms are influenced by both economic and environmental considerations. The desire for affordability aligns with research indicating that cost is a primary driver of sustainable consumer behaviour (Shao & Ünal, 2019). However, logistical barriers such as limited availability and quality concerns must be addressed to enhance the adoption of sustainable practices. Community engagement, through initiatives like uniform swaps and educational campaigns, can play a crucial role in normalizing sustainable behaviors and reducing social stigma associated with second-hand uniforms (Bianchi & Birtwistle, 2011).

Methodology

The study employs a mixed-methods approach, combining material flow analysis, surveys, and focus groups. A survey of 102 parents from a secondary school in Victoria, Australia, was conducted to gather data on uniform purchasing behaviour. Additionally, a one-hour focus group discussion was conducted with six parents to gain deeper insights into their expectations and concerns regarding the quality, durability, and functionality of school uniforms.

Findings

Material Flow Analysis

Understanding the composition, lifecycle, and environmental impact of school uniforms are essential for evaluating their sustainability within a circular economy framework. A detailed examination of the materials used in the school's uniforms was undertaken, as shown in Figure 1.

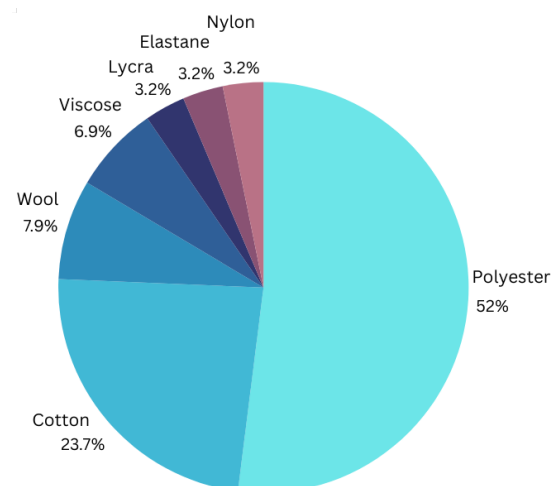


Figure 1. Material composition of school uniforms from the school used in this case study.

The current study reveals that school uniforms are made from a variety of fibres, with polyester being the most common at 52.1%, followed by cotton (23.7%) and wool (7.9%). The blending of numerous fibers to make uniforms poses significant recycling challenges. Therefore, alternative strategies are needed to incorporate circular economy principles. Following this, surveys and focus groups explored stakeholder perspectives on sustainable practices and their openness to alternative uniform management

solutions. This preliminary analysis underscores the critical need to understand parents' consumption behavior regarding school uniforms.

Survey and Focus Group Findings and Analysis

The findings highlight several key aspects of cost and accessibility, environmental awareness, and quality concerns in the context of school uniforms. Affordability emerged as a significant factor in this study, with 86% of parents who opted for second-hand uniforms citing cost savings as their primary motivation. Many families view second-hand purchases as a practical solution to the high costs associated with new uniforms. This aligns with reports indicating that in New South Wales, the average annual expenditure for public-school uniforms ranges from AUD 250 to 300 (Vincent, 2022). Findings from this study reveal that 31% of parents purchase new uniforms every year, 25% buy uniforms only once every two years or more, and 11% purchase uniforms every semester. Additionally, 24% of parents prefer second-hand options for cost savings. However, despite their willingness to embrace second-hand options, 44% of parents identified the limited availability of sizes and styles as a significant barrier.

Environmental awareness is also driving changes in consumer behavior. A notable 61% of parents chose second-hand uniforms to reduce their environmental impact, reflecting a growing trend towards sustainable choices (Abbate et al., 2023). However, quality concerns remain, with 18% of parents feeling that second-hand items did not meet their standards due to wear and tear. This underscores the need for durable uniforms that justify their cost, as parents expect high-cost items to provide lasting value (Fletcher, 2014; Niinimäki, 2010).

Quality, durability, and functional suitability are critical factors for parents when selecting school uniforms. Concerns about fabric quality were frequently voiced, with parents emphasizing the need for breathable, washable, and durable fabrics. This expectation aligns with research suggesting that consumers increasingly value longevity in apparel (Cooper et al., 2016; Goworek et al., 2023). Comfort is another important consideration, particularly in warmer climates where some materials were noted as uncomfortable. Research supports

that fabric comfort and ease of maintenance significantly impact satisfaction (Fletcher, 2014). Additionally, certain styles, especially for girls, were seen as impractical for active school environments, highlighting the importance of accommodating the active lifestyles of young wearers (Rissanen & McQuillan, 2023).

Sustainability awareness and educational opportunities are also crucial. Parents advocated for greater transparency in uniform production, particularly regarding fabric composition, traceability, and sourcing. This aligns with research suggesting that transparent supply chains enhance consumer trust and promote engagement in sustainable practices (Bianchi & Birtwistle, 2011). Furthermore, parents emphasized the importance of integrating sustainability education into the curriculum. Practical activities such as upcycling projects and educational sessions on textile reuse were proposed to bridge knowledge gaps and make sustainability more tangible for students (Jones, Selby, & Sterling, 2010).

Logistical barriers and implementation challenges were also identified. Limited availability in sizes and styles of second-hand uniforms was a key obstacle, making it difficult for families to find suitable options (Bianchi & Birtwistle, 2011). Additionally, concerns over cleanliness and perceived quality of second-hand uniforms were noted, reflecting potential barriers in terms of social acceptance and quality perception (Guiot & Roux, 2010).

Community engagement and the promotion of sustainable practices were highlighted as effective strategies. Parents suggested organizing uniform swap events, competitions, and interactive campaigns to create excitement and awareness. Research indicates that structured, community-based events can effectively foster positive perceptions of eco-friendly choices (Prothero et al., 2011). These initiatives can help build a supportive community around sustainable practices and encourage broader participation in circular economy principles.

Conclusion

The study underscores the importance of addressing logistical and perceptual barriers to foster sustainable practices in school uniforms. By enhancing the availability and quality of second-hand options and engaging the

community through educational initiatives, schools can promote a circular economy model that aligns with parental expectations and environmental goals. Future research should explore the integration of digital tools and community-driven approaches to further support sustainable practices in school uniforms.

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