



## Understanding the Concept of Cotton Circularity Using Omnichannel Perspectives Through Experiential Learning Opportunities

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**Introduction.** The latest report from the World Markets and Trade Report (2022) suggests that the growth of cotton production is expected to increase in 2023. Further, the demand for sustainable cotton has increased in the textile and apparel (T&A) industry in recent years due to consumers' increased awareness of a sustainable environment. Circularity is a concept where a product is created with its end of life going back into the supply chain, which for apparel products, goes back to the T&A supply chain (Nicolaus, 2021). Cotton is a natural fiber derived from a plant, thus making it inherently circular. The term circularity of cotton means that cotton is reusable, recyclable, and returns to nature. Hence, cotton is a sustainable material that can achieve ecological balance in the pursuit of global environmental sustainability.

The most environmentally conscious consumer group is Generation Z (Gen Z). Therefore, this project is designed to provide students with experiential learning opportunities to understand cotton sustainability through the lens of cotton circularity in digital commerce. This project aims to provide students with the tools and methods to collect information from consumers, investigate consumers' perceptions of sustainable cotton products, and develop ideas to fill the gaps in sustainable cotton product assortments that are yet available in the market.

**Experiential Learning.** Kold (1984) developed experiential learning theory based on the idea that experiencing is an important development in knowledge construction. Learning occurs through discovery and active participation in four stages. The experiential learning process occurs in 4 stages, concrete experience, reflective observation, abstract conceptualization, and active experimentation. In this project, students gathered information from digital commerce and applied the key concept to enhance their problem-solving skills. Industry panel expert and consumer interviews, hands-on projects, and other assignments were developed to support the experiential learning process.

**Project Detail.** This ongoing, multi-semester project intersects three academic courses: Consumer Data Analytics, Omnichannel Retailing, and Apparel Technical Design. As of this writing, the Consumer Data Analytics course, completed in Spring 2023, has already been concluded, with the remaining two slated for Fall 2023.

In Clothing/Textile Consumer – Data Analytics class, students have developed a survey to assess consumers' knowledge about the circular lifecycle of cotton and investigate consumers'

perceptions of sustainable cotton products. Survey results were visualized and communicated in the form of business reports and presentations. Figure 1 presents examples of the students' final report and survey results.

Interviews were conducted in this course to evaluate the student's learning outcomes. Merging the knowledge of cotton sustainability and the concept of cotton circularity in digital commerce, students were expected to 1) learn about cotton circularity during lecture and learning modules, 2) incorporate cotton circularity into their survey design, and development; 3) collect, analyze, and interpret first-hand data from consumers; 4) communicate data results with the target audience through data visualizations. According to the interview data, most student groups successfully applied the principles of research design and statistical analysis to real-world scenarios by creating their own surveys, gathering primary data, and analyzing/presenting the results.

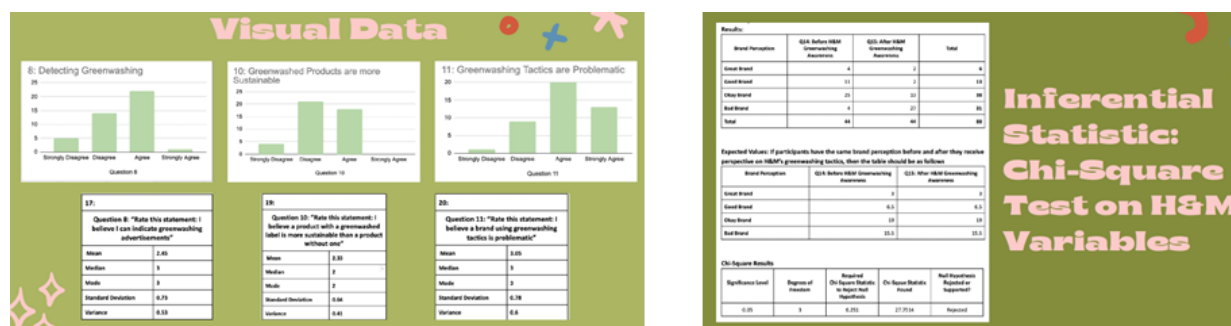


Figure 1: Examples of Students' Survey Results and Report.

The interviews were conducted at the end of the Spring semester, each lasting for 30 minutes. They were either done in person or via Zoom. Sample interview questions include: "How has this class broadened your understanding of fashion/retail consumers?" and "What challenges did you or your group encounter in this class while learning about cotton circularity and fashion sustainability?" Although some students faced significant challenges due to their relatively weak statistical backgrounds, the students unanimously agreed that the class projects and assignments enhanced their understanding of cotton circularity and fashion sustainability. They appreciated the opportunity to apply their statistical knowledge to explore fashion consumer behavior. For instance, one student shared:

*"I learned Quite a bit after looking at our survey results, it was interesting to see how many people go shopping, often for jeans and how many people think about sustainability it was not as many as we thought when they purchased jeans. So just kind of open my mind to how many people don't think about it versus what I thought."*

In addition, in the Omnichannel Retailing class, students will focus on how retailers promote circular fashion in the omnichannel environment, especially in digital commerce. Students will understand the circularity of cotton by examining Digital Commerce to find, record, develop, and present cotton sustainability products that are and are not currently available in Digital Commerce. In the Apparel Technical Design class, focusing on the circularity of cotton, students will develop an apparel product using repurposed/recycled cotton fabric to support a sustainable design. Interviews and pre and post-test surveys will be conducted in both classes to analyze students' awareness and perception of cotton circularity.

**Conclusion** It has been shown that adopting experiential learning in teaching will help enhance student's learning experience. Based on the result of the consumer data analytics class, through the experimental learning in working on the survey questionnaire, students were able to learn through the concepts presented in the classroom and hands-on apply them to industry needs, hence, better equipping them to enter the industry. Utilizing a combination of innovative teaching methods and tools in different classes through data visualization, merchandising assortments, and apparel tech design, this project will effectively help students learn and understand cotton sustainability through the cotton circularity concept in digital commerce.

## References

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