



## Perception of Apparel Sustainability Based upon Cultural Differences among Design Students

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**Introduction** Designers need to understand the breadth of strategies for developing more sustainable solutions (Shedroff, 2009). Design students' concepts of sustainability are different depending on their cultural contexts and approaches to sustainability issues that universities have taken that vary across cultures. In this research, we examine how American and Korean design students perceive the importance of sustainability regarding their apparel as a user and professional and how they strategize sustainable practices. This cross-cultural comparison of American and Korean students perceptions of sustainability can provide valuable insight regarding how cultural factors shape and influence a group's sustainable behavior and can help the instructor who wants to educate students as broadly as possible.

**Literature Review. 1) Perception of Sustainability in Different Cultural Contexts** People make sustainable decisions based on their perception of sustainability (Zimmer et al., 1994). Designers are no exception. However people's perception of sustainability may be so deeply rooted in their culture that they no longer recognize their perception as culturally unique (Gambini, 2006). Designers may habitually go through the design process to solve sustainable problems without considering the full range of possibilities. Understanding design students' perceptions of sustainability based on their culture could support their sustainable acts and help them develop innovative sustainable strategies.

**2) Roles of a User and a Professional in Sustainability** The roles of design professionals and users are related. Design professionals have contributed to sustainable product development through life-cycle analysis as well as fundamental systemic shifts to promote new meanings and styles of thought (Black, 2013). Users may lead sustainable innovation through selective or active participation in the design process (Ornetzeder & Rohrer, 2006).

**Methods** Students who were taking introductory level design classes were asked to participate in a survey about their perceptions of sustainability, its importance to the user and professional on a 7-point Likert scale, as well as practices they would consider to make clothing more sustainable. The participants consisted of 89 American (Average birth year: 1991.67) and 91 Korean design students (Average birth year: 1991.14). The survey took approximately 10 minutes. Data were analyzed and interpreted in light of cultural statistics and observations about differences in the two cultures regarding sustainable opportunities and practices.

**Results and Discussion** We learned that American and Korean design students perceive and strategize sustainability differently. For example, over half of American students (57.30%) listed donating clothing as a sustainable action and more American students (39.32%) than Korean students (34.65%) used a thrift store to achieve sustainability. This result was considered in light of the number and type of used clothing stores in Minneapolis and Seoul. Most secondhand

shops in Seoul are limited to extending the life of luxury goods without altering, while shops in Minneapolis run the gamut of goods from high-end to thrifty discards. This means that American students often need to make use of apparel sustainable systems differently. For example, when questioned about use of thrift stores, American students told of how they achieved their appearance, e.g. tried on a dress too long and shortened, took off the collar, added a sweater. As an aside, it may be the reason why American students think the role of professional (5.75) is more important than user (4.34) as they actively redesign their second hand clothing purchases.

Both American and Korean students responded that being aware of sustainability in clothing is more important as a professional than as a user. However scores regarding the importance of sustainability as a user were slightly higher for Korean students than for American students. In interpreting this data, we examined the differences in population density in Korea and the US and reasoned that higher scores of Korean students could have been influenced by their higher population density and a greater perceived need to consider sustainable solutions. We also determined another reason for Korean students' high sustainability perception as a user is their score for managing clothing: 46 Korean students (50.55%) and 11 American students (12.36%) reported managing clothing properly as one good way to achieve sustainability. The result also may relate to differences in regulations for energy use in Korea and the USA (Kim, 2012). We found that American and Korean students' sustainable strategies appeared to relate to differences in their environmental, social and economic backgrounds.

**Conclusion** In this study we strategize how to improve sustainability in apparel via the role of designer, with an apparel system dependent on different cultural contexts. Interestingly, students did not mention some sustainable strategies such as purchasing up-cycled clothing or wearing clothing serving multiple looks. By gaining an understanding of these results, we are able to identify how students perceive and practice sustainability regarding apparel. This cross-cultural comparison provides valuable insight about students' perceptions of sustainability and how to access students in different cultural contexts. Teaching various kinds of sustainable practices to students may broaden their notion of sustainability.

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