The Role of Museum Exhibits in Teaching Textile Science

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Abstract
A constant challenge for family and consumer sciences (FCS) educators, particularly those in more scientific-based courses, is keeping students interested in course material and ensuring active participation (Ramey-Gassert, Walberg, & Walberg, 1994). The concept of learning outside of the traditional, formal classroom setting is an important component of FCS educational pedagogy. Methods of learning beyond the FCS classroom include visiting museums, accessing archives—both in person and virtually—and participating in field studies (Roehl, 2013).

Disciplines
Fashion Design | Fiber, Textile, and Weaving Arts | Higher Education | Industrial and Product Design

Comments
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A constant challenge for family and consumer sciences (FCS) educators, particularly those in more scientific-based courses, is keeping students interested in course material and ensuring active participation (Ramey-Gassert, Walberg, & Walberg, 1994). The concept of learning outside of the traditional, formal classroom setting is an important component of FCS educational pedagogy. Methods of learning beyond the FCS classroom include visiting museums, accessing archives—both in person and virtually—and participating in field studies (Roehl, 2013). Finding ways to spark and retain interest in course material is vital for student engagement as well as for fostering critical thinking skills and stimulating class discussion. Although many universities maintain textiles and clothing museums, they often are utilized as a resource for students interested in design and history (Reading, 2009). Less is known about the role of museum exhibits as a pedagogical tool, specifically in textile science courses. Thus, the purpose of this teaching strategy was to engage FCS students with textile science concepts through museum exhibits.

Textile and clothing museums preserve cultural and historical heritage and provide opportunities for research, teaching, and aesthetic enjoyment (Marcketti, Fitzpatrick, Keist, & Kadolph, 2011). Museum collections serve as important educational resources for understanding theoretical knowledge through practical applications (Bloom & Mintz, 1990). Previous research shows that teaching in informal settings such as museums, as well as using physical objects to explain concepts, are methods that will help students incorporate creativity into their thought processes and tackle complex topics (Tran, 2007). In addition, educator-led museum exhibit tours have increased students’ interests and their ability to remember course material (Griffin & Symington, 1997).

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Although many universities maintain textiles and clothing museums, they often are utilized as a resource for students interested in design and history.

In this study, the authors incorporated museum exhibits as a way to educate FCS students enrolled in an introductory textile science course. This course is a required four-credit course for all undergraduate students enrolled in the apparel program. The class consists of a twice-per-week laboratory, class meetings, and the completion of quizzes posted to BlackBoard, a web-based, university-supported organizational format.
Method
Over the course of three semesters, the 220 FCS students toured the Mary Alice Gallery, a 500-square foot exhibition space devoted to the Textiles and Clothing Museum (TCM) at Iowa State University. The exhibits included: (a) Tana-Bana, which featured clothing from India, (b) Style Tribes, exhibiting 1960s women’s wear, and (c) Treasures of the Textiles and Clothing Museum, encompassing clothing from various periods and cultures. Figure 1 includes a garment from the Treasures exhibit and its accompanying information.

Students toured the exhibits during one of their regularly scheduled class periods. The students spent approximately 25 minutes in the gallery space with the exhibit curators (the co-authors of this study) discussing the textile techniques on display. Students were encouraged to spend 5 to 15 minutes reading the didactic panels and asking questions.

A questionnaire, developed from a previously funded Humanities Iowa project, was created to assess students’ engagement with the exhibits. It included eight questions on a scale of one to five (1 = strongly agree, 5 = strongly disagree) related to the museum visit and their knowledge, interest, and understanding of textile science. Two open-ended questions were included: (a) What new information did you learn from the museum exhibit and tour? (b) How did the exhibit help in your understanding of the subject? The study received Institutional Review Board exemptions status.

Results
Following the exhibit viewing, all 220 students completed the questionnaire. The quantitative results were analyzed using SPSS. The results indicated that the museum tour helped students gain interest in textile science course content (M = 3.85, SD = 0.88); they were more likely to visit future exhibits in the TCM (M = 3.99, SD = 0.86); and, they were more likely to tell someone else about the TCM (M = 3.94, SD = 0.91). Regression analyses showed a positive relationship between the museum tour and students seeking more information about the TCM (β = 0.35, p < 0.0001), interest in visiting future exhibits in the

Figure 1. Girl’s Dress, 1832
United States
Textiles and Clothing Museum, Iowa State University
992.1.336

For most of the nineteenth century, the majority of women’s and children’s clothing were sewn either by the woman of the household, by servants, or by dressmakers and tailors. Garments sewn at home included simple shirts, smocks, caps, baby clothes, and household textile products, as well as the more difficult-to-sew fashionable dresses.

Children’s dress of the early nineteenth century mimicked the styles of adult clothing, from the popularity of printed cottons in muted colors to broad necklines and voluminous sleeves. This dress dated to 1832 was hand-made by the mother of then-3-year-old Catherine Wright Culver Trusdell. The floral print cotton dress features demi-gigot sleeves (full from shoulder to elbow, with an extension of fabric over the wrist), a wide shallow neckline, and a pointed yoke front above the high waistband. Since synthetic dyes were not invented until 1856, the print of this dress was achieved through natural dyes. It is in part because of the ink and chemical mordant used to create the black vines that the dress is deteriorating in places.
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The qualitative data were analyzed thematically through open coding (Creswell, 1998), and two prominent themes emerged: (a) better understanding of the course material and (b) cultural appreciation. Illustrative examples of students’ responses include (N = 220) the following:

I learned about block (band) printing and screen machine printing. I also learned about yarn dyeing vs fabric dyeing. (Respondent #5)

It helped my understanding of the subject because instead of just reading about it in a book, I could see it face to face. (Respondent #48)

I learned about printing and dyeing techniques in India and how they differ from the U.S. I don’t think I would have learned about this anywhere else! (Respondent #45)

Implications for FCS Pedagogy

Results of this study suggest that providing examples through physical artifacts in museum exhibits enhances FCS students’ understanding of the textile science material covered in formal classroom sessions. Moreover, an even stronger relationship was found between Iowa State University students’ visit to the gallery and their interest in the TCM. This study highlights the importance of using museums as a pedagogical tool, especially within science-focused majors such as textile science. This holistic approach may expand student understanding of course content and their interest in museums. For institutions without a textiles and clothing museum, course instructors can assign students a tour of local art museums or art galleries, ideally with an exhibit focused on textiles.

Learning outside of the traditional, formal classroom setting in educational venues such as museums serves as an important component of FCS pedagogy.

References
