Frances, Donna Joseph, Cleveland

Auckland University of Technology

Crafting New Textile Interfaces

As we move into the third industrial age, textile craft skills such as spinning, knitting, felting, lacemaking and embroidery are at risk of being lost. An aging population with traditional craft expertise are literally taking this knowledge to the grave. Craft skills will only survive if they continue to live on and be practiced in each generation, but nostalgia is not a strong motivation for most young people. New strategies are required to engage youth in learning and using traditional craft techniques.

This paper addresses the issue of digital crafting in the field of smart textiles and ways textile knowledge can be used to inform technical understanding and also encourage engagement with craft. The structural and material nature of a textile determine its behavior and, with the use of smart materials and computing, its capacity to sense, communicate and react. Smart textiles have a digital materiality. An understanding of textile processes makes technologies accessible to younger people and engages them in creating through making, rather than just as consumers and users of black box technologies.

Within the Maker community, e-textiles are often promoted as a way of enabling people to become technologically fluent. In this paper, a number of examples of e-textile workshops offered to specific groups presents some different perspectives and insights into how e-textiles can foster engagement and different types of knowledge. Workshops delivered at traditional crafts events in New Zealand led to an excited response by elderly craftswomen. Their enthusiasm and the comments they made became an incentive for this paper. An e-textiles workshop to teach electronics and introduce coding to young women as part of a program to encourage disadvantaged youth into STEM areas, is discussed in terms of the range of skills the participants gained - not just electronics knowledge but also the textile making skills they acquired.

Subsequent workshops in e-textiles offered as part of a public series of textile design workshops were attended by craftspeople, teachers and designers of all ages. These workshops encourage a sharing of skills and were particularly enjoyed by craftspeople who were delighted to have their knowledge valued and shared with younger people. Finally we consider a group of students from a Creative Technologies degree studio project, involved in designing smart costumes. These students have strong technological skills, but limited knowledge or experience in textile crafts. Their responses to working with and making textiles were evident in the highly creative outcomes of the studio, and their deeper interest, demonstrated by ongoing engagement.

The focus and organisation of these workshops and participants reactions to them are described and analysed. A consideration of these examples has led to some insights into the ways e-textile workshops can be used not only to encourage an interest in electronics and programming but can reinvigorate engagement with textile making processes and increase involvement with crafts practices in new ways that are exciting to young and old, encouraging new forms of collaboration and creative experimentation.