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Evans, Claire and Shah, Karen

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Integrating digital tools into the creative process

Integrating digital tools into the creative pattern experience

Claire Evans

Rapid development in pattern design technology is currently being seen within the fashion industry. The integration of these digital tools into the pattern cutting process by the pattern designer requires them to obtain new computer-based knowledge. Knowledge that introduces alternative protocols into the pattern creation processes and presents opportunities for innovative pattern cutting practice.

Participants will get an opportunity to see a demonstration providing an overview of the processes that take place when cutting an abstract piece by hand and integrating the use of computerised pattern software into the creative pattern process.

This demonstration is based on the results of a practice-based research project examining the pattern activity that takes place whilst cutting a series of abstract designs/artifacts using both traditional and digital tools. It compares the pattern cutting activities when using different tools and notes the points where there is a perceived advantage to switching tools. Results indicate that the development of patterns is supported through the integration of digital technology in the pattern design process. That digital pattern technology integrated into the pattern development stages provide scope for innovation in creative pattern practice. Thus the combination of the tradition and digital can enhance the creative experience.

Key words: Pattern cutting, Creativity, Digital pattern technology, Innovative practice

Creative outputs can be effected by the tools the designer uses.

The tools used by pattern designers to move garments from conception to manifestation are now starting to become increasingly more digitally based. This is changing and blurring the pattern development stage, as technology becomes more sophisticated in interpreting pattern designs before they are even cut out. As is suggested by Barbara Bolt **'materials**

are not just passive objects to be used instrumentally by the artist, but rather the materials and processes of production have their own intelligence that come into play in interaction with the artist's intelligence' (2010, pp. 29-30).

Sternberg and Lubart's investment theory suggests that **you require the correct environmental context to enable creativity to take place**- six resources are required to converge to enable creativity to take place: intellectual abilities, knowledge, style of thinking, personality, motivation, and environment (Robert J. Sternberg, 2006, 2012; Robert. J. Sternberg & Lubart, 1991).

Technology has provided the pattern designer with the ability to store large amounts of data and develop work more quickly. Fashion designers abilities lie in being the creators of the future, unlike the sciences who problem-solve the present (Parsons & Campbell, 2004, p. 88). Designers have to learn to have the self-confidence to define, redefine and change the problem-as-given in the light of the solution that emerges from their minds and hands then technological tools can help the designer to create new solutions. Technological tools can assist the designer in solving their problems, but cannot construct the problems for them. People who seek the certainty of external structures, well-defined problems will never appreciate the delight of being a designer (Cross, 2008, p. 24).

The creative process involved in the interpreting of garment designs is what makes the role of pattern designer so significant within a garment design team. The pattern designer is responsible for ensuring technical strategies are fully implemented in the creation of the garment whilst enhancing the aesthetic appeal. The pattern designer's creative eye concerning the cut and appearance of the garment will have an impact on the resulting garments aesthetic appeal and thereby sales. However Richard Sennett suggests that **the smart machine can separate human mental understanding from hands-on learning (2008, p.39).**

Bilda and Demirkan when observing architects sketching activity using traditional and digital tools note that 'designers were more effective in using time, conceiving the problem, producing alternative solutions and in perceiving the visual-spatial features and the organizational relations of a design in traditional media rather than digital media during conceptual design' (2003, p. 49). **Nevertheless although CAD can be precise, scale and**

3D reality can often be more difficult to realise. Consequently the integration of tactile traditional tools should not be ignored.

This is pertinently expressed by Page ‘ **CAD is a very alien environment to a designer who is creating fashion, as opposed to a garment technologist who is creating technical patterns, and who may adapt much more quickly to the efficiencies offered by CAD and pattern systems.....The new generation of designers, who are experimenting with mixed craft/technological approaches, will be much better equipped and this will change the way people approach design in the future’ (2013, p. 90).**

There is a need to fully understand how digital tools operate and can be integrated into creative pattern design practice. The life span of digital pattern technology is short and as with many digital tools during their early stages of development it appears to be the developers rather than operators that are setting agenda for its use. Lawson is concerned about its effect on architecture ‘**It is beginning to look as though CAD is by no means a neutral tool. Like all tools, it suggests being used in a certain way.** This threatens to set an agenda for architecture that is unhealthy and irrelevant’ (Lawson, 2002, p. 331).

Similarly the increasing use of digital tools in the modern creative pattern designers’ studio environment has an impact on creativity.

Within creative environments ideas are sparked, this can come from a mixture of people, places and resources. Hence, the impact of digital tools on future creative outputs cannot be underestimated. **Creatives are nevertheless flexible and have the capacity to cope with change (Runco, 2004)** and it is possible that **mastering new tools can return novel creative responses**. Therefore combining the use of hand and digital tools to form creative solutions provides opportunities for innovation to take place

Initial observations suggest that in order for creativity to take place **a holistic open minded approach to tool use appears to work. However, in order for this to succeed there is a need to be skilled in the use of tools.** Subsequently it is possible to hypothesise that **the head and hand must work together** to produce creative responses whilst additionally

being open to, but, not over dependent on new tools.

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