2019 SOLSTICE eLearning and Centre for Learning and Teaching Conference

Re-imagining the Future of Design and Technology Education

An opportunity for curriculum innovation

In England as an educational discipline Design and Technology is arguably in disarray. Deliberations about the subject's value and purpose within the core curriculum have taken place since its inception (Bell et al., 2017), however these debates have not been formalised by the subject's community to create a solid research base and, in practice the subject's vision has not ever been fully realised (Barlex, 2017). As the subject declines, so does the community of colleagues teaching and researching within the field, and hence the potential to develop robust.

If there is to be any hope of reversing the subject's decline, we need to do something significant. Hence, considering the future of design and technology, the principal aim of this research is to investigate what a re-designed design and technology could look like.

Methodology

The work is underpinned by social constructivism, and adopts methods derived from an approach informed by constructivist grounded theory (Charmaz, 2014). Work elicited responses from participants who were approached on the basis that each was a key stakeholder within the UK design and technology community in response to the follow question:

"What should a re-imagined design and technology curriculum look like?"

Analysis focused on how theoretical aspects of the study relate to what is happening in practice and seeks to present individual participant perspectives together in the form of a living narrative (Shanahan, 2015) to create a coherent whole from which future work can evolve, and as such through our adoption of this approach as we seek deliberately to present our findings and analysis as a 'work in progress'. Initial coding identified activity falling into three broad central themes: ideation, realisation and critique. **Ideation** refers to the creation of authentic opportunities to engage in speculative questioning and deferred judgement, always encouraged to consider alternative technological solutions to human centric problems. **Realisation** to the skill to create a physical response to a given question as a transformative pedagogy. The development of autonomy and ability to interpret, to develop manual dexterity and fine motor skills. **Critique,** technology explored through authentic activity, contextualised within society, as a tool to serve human needs in order to develop a better society for all citizens. Mindful of the present, with an eye on the future, cognisant of the notion that just because you can does not always mean that you should.

Discussion

Research brought to the fore a breadth of opinion and elicited some areas of 'non-negotiable' common ground. Features of what possible design and technology's curriculum intentions emerged: knowledge, experience and dispositions.

Curriculum intentions

Spanning all participant responses, a series of desirable **dispositions** for emerged. Participants felt strongly that the subject should seek to develop team building, communication (including the extrapolation of ideas), collaboration and resilience. **Experience** relates to what learners 'do' and what is important to know. Authentic approaches to problem solving and an awareness of human needs and wants within a technological society. **Knowledge** extends beyond the boundaries of the subject and relates to a broader body of knowledge; dimensions of knowledge considered in relation to political and global agendas, knowledge for action and within the context of other subject disciplines.

Tensions

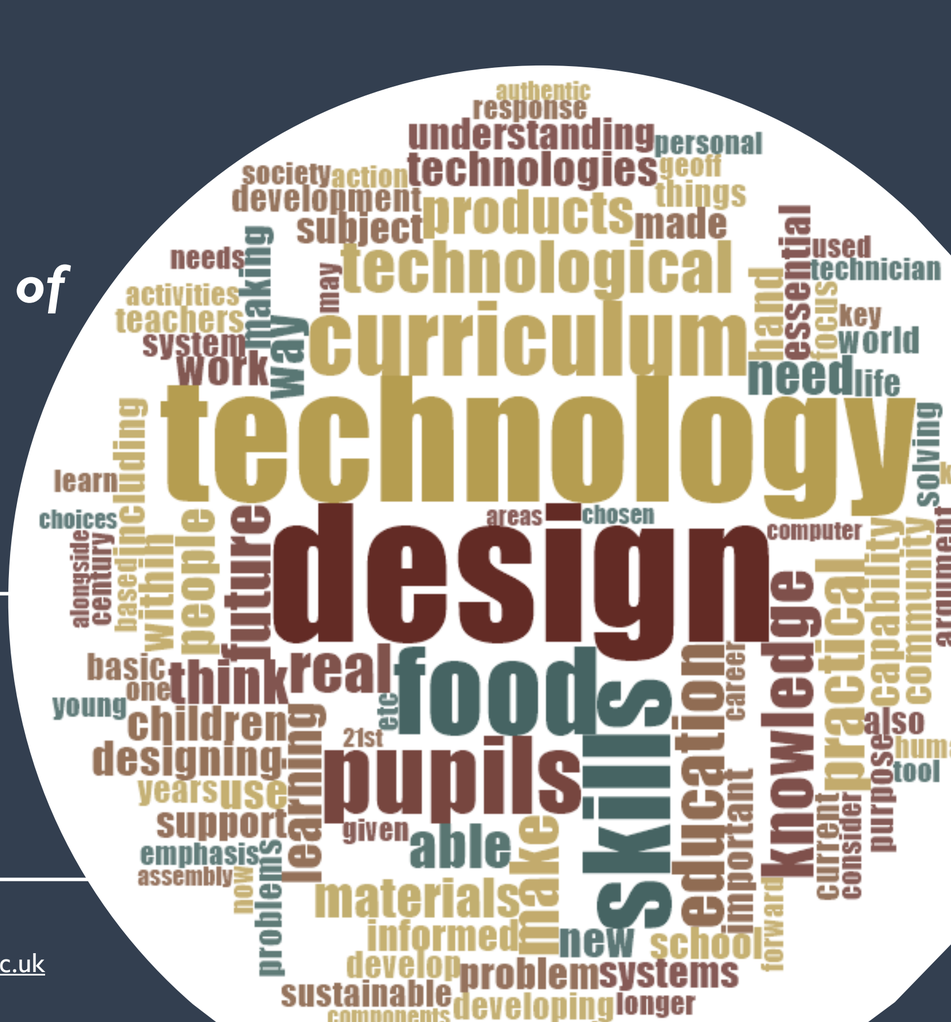
Tensions focused around political drivers, fiscal demands and the academic versus vocational debate. Half of the participants made reference to design and technology's vocational heritage. During analysis it became clear that there are tensions between the concept of a discipline which moves beyond specific materials and a set body of knowledge, and one which advocates traits which could be perceived as being more aligned with established subject origins and traditions.

First phase reflections

Unsurprisingly findings present a diverse range of opinion relating to the subject's future. In seeking to attain some semblance of cohesion rather than continue to focus on the differences, analysis sought to disentangle the data and bring to the fore common insights and understandings.

Only through illumination of the mutual ground, those key elements and features which all agree are fundamentally integral to the subject, can we begin to move forward. To note this is not in any way to say that diversity is not desirable. For clarify, in seeking to identify commonality, within the context of this paper we mean the identification of shared aims, and make clear that we firmly believe that in order to move forward as a unified community, it is essential that we celebrate and promote the interdisciplinary diversity of the subject as a strength. In moving this 'think piece' forward it is intended that the proposed next step will be to formulate a consensus of opinion that leads to a vision of the subject re-imagined. In the spirit of the living document approach we welcome contributions from the community, and invite the open critique, adaption and development of this work.

"Undoing a decade of decline"



Acknowledgement

We would like to thank those who responded to our call for their perspectives on the future of design and technology education. Without the community's engagement this starting point for further discourse would not be possible, hence the support and encouragement received from the community has been very much appreciated.

Selected References

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Dawne Irving-Bell, Edge Hill University belld@edgehill.ac.uk,
David Wooff, Sunderland University David.Wooff@sunderland.ac.uk, Matt McLain, Liverpool John Moores University M.N.McLain@ljmu.ac.uk