Trends in craft education and the value attached to craft

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Abstract

The future of making and the contribution of craft to the creative industries and wider creative economy are dependent on the quality and breadth of education and training on offer. A wide range of industries, including film, theatre and the automotive industry, reap the benefits of craft skills shaped from an early age and developed in the formal education system. Yet Crafts Council evidence shows that the pipeline of future makers is at risk from a weakening emphasis on formal craft education and training.

Professional making is dependent on the value we as a society attach to craft and creative education and the extent to which public policy supports and sustains its evolution and development. The paper explores Crafts Council evidence of trends in craft education and training. Setting these trends in the context of the wider literature about creative education, it asks to what extent we can find evidence to demonstrate the instrumental value of that education. The paper includes consideration of the growing body of inquiry into how haptic learning, a defining characteristic of craft, can increase broader engagement and achievement. The literature reveals how this understanding is being applied not only in craft but in an increasing range of disciplines. The paper asks what this evidence about craft and creative education indicates about future research needs.

For the purposes of this paper, the definitions of instrumental and intrinsic values are taken from Brooks et al (2004). 'Instrumental' is taken to convey an "output-oriented, quantitative approach" to valuing art, while 'intrinsic' refers to the "communicative power" of the arts.

The paper addressing the following questions:

- What do we know about recent trends in craft education and training?
- What evidence is there on the instrumental value of creative education?
- What does the literature tell us about the understanding and value attached to haptic skills?
- What does this evidence indicate about future research needs?

Introduction

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Craft education and training

In response to anecdotal evidence about an impending crisis in provision and participation in formal craft education and training, the Crafts Council commissioned Trends Business Research to design a longitudinal research programme. Its purpose was to generate an evidence base on which to formulate a position on the state of education and training and its potential impact on the future of craft.

The study gathered evidence about provision and participation in all stages of formal education and training from Key Stage 4 through to postgraduate study. The first study considered trends in the provision of and participation in craft courses for the last four academic years for which consistent data were available: 2007/08 – 2011/12 inclusive. A November 2014 update, Studying Craft 2, analysed the data across a five-year period to 2012/13. The June 2016 update adds a further two years' data. To accompany each edition, workbooks setting out the full datasets are published on the Crafts Council website .

Two types of definition were used within the study: the material discipline that the course addresses, and the perceived closeness of the course's relationship with craft. Craft courses were identified using a keyword search . The aim was to understand the extent to which the course had a direct relationship to craft, or provided complementary skills, either in terms of alternative routes into craft or alternative production methods, in order to articulate clearly how these routes could lead to craft.

The raw data identify significant increases in craft-related provision at Key Stages 4 and 5 during the period 2007/08 to 2012/13 of 291 per cent and 181 per cent respectively. It should be noted that the increases are driven in part by a proliferation of units in the way GCSEs are delivered, underlining, for example, the separation of Design & Technology GCSE into graphic design, product design, resistant materials and textiles.

Increases are also visible in further education (FE) provision (508 per cent), mostly at levels 2 and 3, although there are also some increases at entry level and level 1. Many of the new units introduced are short in length. The most significant increase in provision has taken place in employer-related further education – 1,441 per cent over five years - with a large relative increase in availability of craft courses in the last two years. However, employer-related craft provision has not grown at the same rate as all other FE provision over the whole study period, and has therefore become less visible. In addition, the number of courses is quite small relative to the number of courses in other stages, growing from 61 courses to 940 over the six-year period of the study, compared to a growth from 230 to 1,300 in adult general FE. The majority of these new courses have been developed at entry level, level 1 and level 4.

The growing trend towards units which are shorter in length tends to reflect the modularity agenda in higher education. There is also a broadening of the offer available across levels, including new courses at level 4 (for example, in jewellery & silversmithing).

In spite of the evidence of an upward trend in course provision in secondary and further education, overall participation figures for craft, however, reveal a marked downward trend since 2008/09. Notably at Key Stage 4, in which 45 per cent of all craft learners are studying, learner numbers in 2012/13 are 25 per cent lower than in 2007/08, compared with a 3 per cent fall in the total number of GCSE students. Participation in adult general FE declined by 41 per cent from 20,550 to 12,220 during the same period, even though student numbers rose in 2012/13 compared to the preceding year.

Higher education is the only area in which there has been a reduction in the number of courses available: 46 per cent in five years. Almost half the courses available in 2007/08 have disappeared. Some of this trend is likely to be accounted for by an increase in multi-disciplinary courses, such as 3D design, alongside closure of a number of single discipline courses such as glass and ceramics. Undergraduate student numbers, by contrast, have increased modestly in the same period, from 17,940 to 19,330, although 2012/13 numbers have fallen to below 2009/10 levels (19,470). (The pattern in postgraduate higher education of rising student numbers contrasts with most other education stages, but absolute numbers are very small - 120 in 2012/13.)

The significant levels of change identified within the five-year period in both participation and provision point to the importance of continuing to gather data to monitor longer term developments. The extent to which trends in future craft education and training change further will be dependent on the wider value attached to creative education.

Instrumental value

The Crafts Council's findings are an important advocacy tool in making the case for the education offer needed to support future makers and to increase routes into craft careers. It is also relevant to consider the evidence in the context of the wider benefits claimed for craft learning, in particular, and for creative education in general. The value of qualifications is generally acknowledged, but does the evidence about the impact of creative education and participation on individual development offer us additional insights into the value of craft?

Evidence from the Government's Taking Part data (DCMS, 2015:3) confirms that 'frequent dancing, drama and crafts activity are significant predictors of greater happiness. Those who write literature frequently have lower life satisfaction. Those who perform music and do crafts frequently find life more worthwhile, although those who perform music yearly or write literature frequently report higher anxiety.'

Ofsted, the UK Government inspection and regulatory body for education and skills, regularly evaluates the strengths and weaknesses of art, craft and design education in England (mostly recently in 2012; see also Yair (2013)). In the context of declining participation in craft-related education, highlighted in the Crafts Council's findings above, it is interesting to note the most recent Government findings. The latest report focuses on underachieving pupils and under-represented groups, commending projects initiated by external agencies, stating that work with creative practitioners raised pupils' aspirations and achievement at all ages. The report refers to West Midlands-based Craftspace's success in re-engaging a group of boys who had been persistently absent from school. As a result of the Craft=Skills for Life: Wheelers Lane project, attendance rose by 66 per cent and behaviour improved by 67 per cent among the study's cohort.

The Cultural Learning Alliance (CLA) is emphatic in its assertion that cultural learning delivers instrumental outcomes: 'There is clear evidence that cultural learning produces positive educational and social outcomes. It helps young people to learn more effectively, developing their cognitive skills and inspiring new ways of thinking' (CLA 2011b:9) and, that the document 'is an argument for the motivation, participation, achievement and sheer enjoyment that cultural learning brings' (ibid :13).

The CLA draws on its own survey of existing English language data on the instrumental outcomes of cultural learning (CLA 2011a) and cites Taylor et al in the CASE programme of strategic research led by the Department for Culture, Media and Sport (DCMS) (2015:9), Studies in general testify that cultural participation can contribute to social relationships, community cohesion, and/or make communities feel safer and stronger. A majority of studies also supports positive links between arts participation and social inclusion, suggesting that cultural participation results in an improved capacity for cultural citizenship, boosting confidence and developing social skills which lead to more effective engagement with the community at large.

Yet, the latter notes, 'evidence of the relationship between arts participation and education impacts shows positive effects on intermediate outcomes (e.g. self-concepts, improved relationships between staff, students and parents) but less evidence links arts participation to final outcomes (NB education attainment).'

Further questions about claims for the instrumental impact of arts participation on educational attainment are raised by See and Kokotsaki (2015). The researchers examined over 200 pieces of existing academic research 'to identify the most promising ways in which learning through the arts can support disadvantaged young people to achieve key educational outcomes'. Their findings lead them to conclude that, though there are promising leads, there is insufficient robust evidence to be able to demonstrate a causal link between arts education and academic attainment and, that the wider attainment gains sometimes claimed for arts education are not clear-cut as we might like them to be. The researchers conclude that the current state of the evidence-base linking arts education and attainment is weak.

Weaknesses identified in the evidence base about the instrumental value of arts and cultural education point to the need for further research to enhance our understanding of the educational outcomes claimed for participation. This also raises the question about how to identify further evidence specifically about the value of craft participation. In addition to gathering evidence through the Crafts Council's formal research programme, our own professional development and informal education programmes for young people have generated rich feedback that enables us to refine and target appropriate support for professional makers, as well as providing deep insights into how craft participation impacts on young people.

As a national development agency for craft, the Crafts Council records anecdotal evidence whenever it comes to our attention, as a source of understanding perceptions and experiences of craft. Our own programmes have generated valuable reflections about the stimulation and enjoyment promoted by craft participation and the potential impact of haptic engagement on young people's school experience. Firing Up , a Crafts Council partnership programme, teamed up Higher Education Institution ceramics departments with local secondary schools and artists and makers to 'refire' dormant kilns in secondary schools across the UK, enabling teachers to teach ceramics confidently and inspire students.

Following participation in one of the cluster programmes Sarah Cawthorne, Head of Art, Wellfield School, Sunderland, noted that: 'The pupils have benefited from working with clay, because they've learnt to take more ownership of their work. I was also very surprised, as a couple of the louder children went very quiet when using clay.'

A Head of Art in the Manchester Firing Up cluster said:
A lot of our kids don't speak English as their first language and a proportion aren't literate in their first language. Being able to express their thoughts using their hands has really improved their grades. They have produced work that they wouldn't have had the opportunity to produce, had they not been working in clay and had they not been working in 3D. Successes in art give children the confidence to do well in other areas. They're now more confident and more excited about talking about what they've done. Attendance is better for some of those pupils. They've really engaged with our subject but they're starting to engage more with school. So, it's having a big impact on them holistically.

These insights into the experiences of young people prompt questions about the how we might measure and evaluate the impact of craft engagement on individuals' learning and development, in the context of the wider potential instrumental value of learning craft skills and the intrinsic value of craft to the individual and to society.

Haptic engagement

One of the distinguishing characteristics of craft as a discipline is the development of the haptic learning skills described in the anecdotal evidence above. Dee Dickinson (1997:1) asserts that we have known for a long time that there are major perceptual differences in how people take in information. Citing Lynn O'Brien of Specific Diagnostic Studies, she notes that some students can learn effectively by listening, but that those students whose strongest learning channel is auditory comprise less than 15 per cent of the population.
On the other hand, students who demonstrate a visual learning style are about 40 per cent of the population. It is important for them to have illustrations, charts, and diagrams along with words and numbers. There are also many students who must hold ideas in their hands before they can understand and learn. Abstractions presented in words and numbers may not be easily understood without manipulatives or concrete examples. These kinaesthetic or haptic students form around 45 per cent of the population.

Given the significant proportion of the population for whom O'Brien identifies haptic learning as the strongest learning channel, we might anticipate a corresponding interest in research to explore the value and role of such skills. We know that such research is taking place across a number of disciplines, from engineering, robotics, developmental and experimental psychology, to cognitive science, computer science, and educational technology. Examples from these fields are described below. Work is also being undertaken in application areas such as surgical simulation, medical training, scientific visualisation and assistive technology for people with disabilities. The breadth of areas being investigated points to an interesting thread of enquiry, yet also to the relatively limited evidence base in this area.

Much of the literature builds on notions of the centrality to intelligence of our human hand and how crucial the manipulation of the hands is to cognitive learning, building on well-documented evidence on the role that hands play in processing information about object shape (for example, Bliss et al. (1966); Jouen and Molina (2005)) . Wilson (2005 and 2005b), a neurologist at the University of California School of Medicine considers the hand as a 'musculoskeletal organism' emphasising how crucial the manipulation of the hands are to cognitive learning.

The field has grown dramatically as haptic researchers are involved in the development, testing, and refinement of tactile and force feedback devices and related software in virtual environments and the huge growth industry of gaming. These allow users to sense ('feel') and manipulate three-dimensional virtual objects (McLaughlin et al. 2002).

Scientists at North Carolina State University are investigating how real-time, interactive visuo-haptic (visualisation and force feedback) simulations can assist in the teaching of science and technology concepts, for example, heat, temperature, and Brownian motion. The research draws on earlier work (Jones et al 2003) which found that tactile and kinaesthetic feedback influenced middle and high school students' learning about virus structure and function. The study found that students developed more positive attitudes about science and showed significant gains in their understanding of viruses.

In medicine, consultant plastic surgeons from major UK hospitals are working alongside academics at the University of Lincoln to develop drawing and modelling skills normally the preserve of Fine Art students, which they can then apply to breast and facial reconstruction. The sessions have informed a major new research project, The Art of Reconstruction, funded by the AHRC.

In the field of artistic creativity, Pavlou (2009) notes that studies of artistic development tend to focus on two dimensional mark making and image making, to the exclusion of three dimensional making and the development of skills in creating form and structure. She recommends that sound empirical research into children's three dimensional, materials-based learning is needed. Pavlou draws attention to a single, earlier study of older children working in clay, before conducting her own analysis of a class of 5-6 year olds who were encouraged to respond to a trip to the zoo by constructing ostrich figures from resistant materials. Her findings can be summarised as follows:

- Materials arouse young children's curiosity, offering intrinsic motivation that produces sustained concentration and eventual pride in accomplishment.
- Making in three dimensions encourages active problem-solving and flexible thinking. In this case, stability and balance posed challenges - given the ostrich's long, thin legs – that the children overcame, either technically (taping feet to the table) or conceptually (envisaging the ostrich sitting down or asleep).

Pollanen (2009) asserts that working within a structured framework allows dexterity, confidence, focus and patience to be developed. She describes the process of using craft skills to solve complex, real-world problems which is personally rewarding and cognitively challenging, involving investigative prototyping, testing, collaborative problem solving and on-going reflection, as well as making. She also suggests that this approach extends easily to other settings, encouraging pupils to adopt diverse roles and think in interdisciplinary teams.

The isolated examples cited above, taken from essentially disparate disciplines, underline the diversity of interest in the field of haptic skills. It is clear that studies continue to advance our understanding of the impact and value of the application of haptic skills, but the robust evidence about how they add value to craft remains limited. Further research is needed to understand the impact on individual development of haptic engagement through craft and, in the first instance, to devise an appropriate method to measure that impact and to describe the value added to the learning process.

Conclusions

Attention is focusing increasingly on concerns about the future of creative education and the resulting impact on the future pipeline of makers and their contribution to the wider creative economy. These concerns underline the importance of interrogating the existing literature for evidence to demonstrate the value of craft and creative education, including how to describe and understand the particular value added by haptic engagement. The emerging field of inquiry into the role of haptic learning in a wider range of disciplines lends itself to further scrutiny for findings which may have resonance for craft, or which may offer approaches to further research about the impact on individual development of haptic engagement in craft.

Set in the context of DCMS evidence that craft participation is a predictor of individual happiness, we need to deepen our understanding of both the instrumental and the intrinsic value of craft learning. Further research is needed to monitor and analyse trends in craft education and training (an argument could be made to consider both formal and informal learning, although evidence of the latter is harder to obtain comprehensively) and to explore new approaches to demonstrating the impact and value of craft and creative education.

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A full set of findings for the Studying Craft series, together with contextualised discussion and analysis, can be found on the Crafts Council website at http://www.craftscouncil.org.uk/what-we-do/research-reports/

Data sets were sourced from the Learning Aims Reference Application / Learning Aims Database, the National Pupil Database, the Individualised Learner Record, the Universities and Colleges Admissions Service and the Higher Education Statistics Agency.

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