DIGITAL PLATFORMS FOR CRAFT

IN THE UK AND CHINA

Final Report
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Machinic entanglement facilitates new kinds of action, news forms of collaboration and new ways of design through making, associated with craft practice. This is an exciting and opportune contemporary research project that is concerned with reevaluating the role of crafts in the 21st century, proposing digital technologies and design methodologies to enhance maker production, visibility and distribution.

Both the UK and China have distinct and different craft practices and heritage, but both have rich traditions making in and understanding of wood, bamboo, ceramic, cloth and metal. China also has an emerging digital technology−orientated multi maker communities, whereas in the UK such communities have been vibrant and highly visible for a decade. What is important is that both countries and communities, according to the findings of the comparative study, have not only started to apply digital production and design software to their maker skills, but also recognise that design thinking is essential to future survival. Design thinking encompasses problem solving that begins with understanding what people may need, either though forms of public engagement to devise new prototypes or by investigating the different platforms that are currently in use. These could be through social networks, 3D printing, laser cutting, digital software (CorelDraw® or SketchUp) and on line market places (like Esty or JingDong). Machinic entanglements, the partial knowledge of the state of two systems, in this case craft as physical objects and computational creativity, are insufficiently examined whether in Government policy or practice. Workshops, interviews, collecting and analysing data across UK and China have given the research teams new insights and understanding of what new conversations need to take place. One example is live streaming. It is an easy way to reach your community and it is also where potential users can engage with the craft/design thinking/making processes in e-education environments and in real time. It is also a means for makers to explore new sales opportunities.

This is the gap in which the UK-Sino digital platforms for craft, report seeks to make a difference. Their recommendations can drive innovation, growth, and the customer experience, supporting craft's sustainability through digital infrastructure. Each ensures that the creative economies in both China and the UK have a future in which to thrive.

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II. Foreword from China

Crafts play an essential role in people's daily life, and it reflects people's material and spiritual needs. Technological development has brought great convenience to people's life and production, and the critical value of handicraft is further explored in the digital era. The difference between cultural heritages, digital technology, government policy, and craft infrastructure of China and the UK brings the opportunity for the contemporary design practice of handicrafts on digital platforms.

This project has carried out in-depth research on the application of new technologies in the Chinese and UK craft industries, including production technology, promotion of new media, design platforms, etc. Research involves desk research, stakeholder surveys, and in-depth interviews with stakeholders in urban or rural area (China and the UK) of existing uses of digital platforms. Then the researchers developed insights between China and the UK on the uses, challenges, and potential of digital platforms for crafts sectors, and finally form valuable suggestions to craft departments and practitioners in China and the UK. For example, Alibaba building a professional sales platform which can help businesses understand customer preference/ trends through analysis tools to support craftmakers sale their products. This practice in China which could beneficially apply to the UK. And Craft Hubs, Maker spaces with 3d printers, laser cutters are publicly available in the UK which could beneficially use to China.

The results of this study have a wide range of observational perspectives, while the challenges to the development process of the craft industry have been deep excavated. Through the comparison of the development advantages of the two countries, the recommendation given has adequately explored the further development of the craft industry and creative economy in China and the UK. Research on digital platforms in two different cultural contexts has brought new insights and opportunities to a new generation of craft consumers and practitioners.

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Chapter 1
Executive Summary

The rise of digital technologies in our contemporary digital era has radically changed how we live our lives and how craftmakers work. At the same time, digital tools and processes have transformed many craft skills from making by hand to making by computer. This report presents the findings of a 20-month research project between the UK and China which examined how digital platforms are used for craft in order to identify challenges and opportunities for craft in the Fourth Industrial Revolution.

What is Craft?

This report draws on contemporary research to characterise the **key features of craft as: Craft is a skilled activity in which makers plan production, explore materials, and produce functional objects which inherit and embrace cultural meaning**.

How are Digital Platforms Used for Craft?

Extensive mixed methods research including interviews, workshops, researcher immersions, focus groups, were undertaken with craft stakeholders in this project to explore the use of digital platforms for craft. Digital platforms are used throughout the craft process from inspiration to production, promotion, sales, and even materials and packaging. **Digital platforms here refer to all kinds of digital technologies used in craft activities** from online marketplaces and social media through to digital production tools, and makerspaces.

How are Digital Platforms for Craft Different in the UK and China?

In the UK, photos and videos posted on Instagram and Facebook are often used by craftmakers to share and promote their craft. In China, many craftmakers use **live streaming** platforms to share their craft stories and practices, teach craft skills, and present their final work in real-time. Also, **crowdfunding** to pre-fund craft projects is more prevalent in China than the UK and helps to reduce financial risk to makers.

The UK has many craft hubs and **maker spaces** which are equipped with digital equipment such as 3D printers and laser cutters, more importantly, those hubs and spaces are generally available for makers to access. In China, those facilities are either in private studios or universities, which are not easy for most makers to access.

Craftmakers are concerned about the impact of digital platforms on protecting their **intellectual property** (IP) in both the UK and China. Individual craftmakers rely on their personal brand and established client base to mitigate against the risk of IP being copied, and larger craft organisations often hire specialist lawyers to protect IP. Craftmakers in China are especially concerned about the lack of IP protection when promoting and selling their crafts through online marketplaces despite many marketplaces offering IP protection.

Unsurprisingly, **government policies** that support craft are different in the UK and China. In China, the government carried out a series of policies to protect cultural heritage including craft and strategically support craft education through digital platforms. In the UK, craft organisations are more likely to play a role in promoting craft innovation practices and supporting grass-root initiatives such as maker spaces, craft hubs, and networking.

Recommendations

Digital platforms have inevitably reshaped the craft sector in both countries. On the one hand, digital technologies provide more possibilities for craft making. For instance, mould making can be undertaken much quicker by 3D printing than by hand. On the other hand, many makers may have to sacrifice their **precious making time** to learn digital skills such as using design software and managing social media accounts. Key challenges to using digital platforms for craft along with recommendations to address these challenges were identified with craft stakeholders:

Recommendation: Digital Skills

Increased provision of digital skills training and awareness is needed to help craftmakers make the best use of social media, production tools, and online marketplaces for their craft. Supporting outsourcing of digital aspects such as social media management would help to reduce the additional time burden of using digital platforms.

Recommendation: Access

Greater access to high-speed internet especially in the UK and high-quality digital production tools especially in China should be made available through government infrastructure and maker spaces. Community-based, not-for-profit, and guild based online marketplaces should be encouraged in order to increase access to markets. These could also offer routes to crowd-funding, which would help to reduce financial risk.

Recommendation: Engagement

Embracing live streaming may provide a route for craftmakers in the UK to connect with wider audiences for craft and build networks of trust. Diversifying activities at craft exhibitions in China may help to increase customer engagement, for example through hands-on training with craftmakers as is often offered at UK exhibitions.

Recommendation: The Physicality of Craft

Craft produces physical objects which are impossible to touch online. Augmented Reality might offer ways to convey the physicality of craft objects when they can't be touched.

Recommendation: Intellectual Property (IP)

A craftmaker's intellectual property is arguably one of their greatest assets. Greater awareness of IP protection of craft needs to be provided by online marketplaces and governments. This would help encourage the use of digital platforms to promote and sell craft.

Recommendation: Lifestyle

Many craftmakers have a personal preference for the non-digital nature of craft. For example, working with their hands. A balance is needed between making and the necessary digital aspects such as advertising on social media and selling on online marketplaces. Similarly, whilst many craft consumers have a personal preference for traditional styles, craftmakers may gain new customers by exploring crafts for people born in the digital age.

Conclusions

This report investigates what and how digital platforms are used for craft in the UK and China. Digital platforms break the boundaries of time and space and allow craftspeople to learn and promote their craft even in the rural areas of China. They also bring challenges of time, skills, access, expense, and perception, which need to be addressed to increase the longevity and sustenance of craft in the digital era.

Underlying the findings of this report is the need to ensure that traditional and pure hand-made craft retains its value and cultural heritage in the digital era - the challenge is how to make better use of digital platforms to support and inherit craft in modern times.

Chapter 2
Introduction

2.1 Project Overview

Craft has been transformed by the digital era, embracing digital elements during the making, production, and even the selling process. For example, craftmakers use design software such as AutoCAD® and CorelDraw® to facilitate their making processes and help reduce mistakes whilst contemporary machine embroidery requires using digital software to design the embroidery and computer-controlled embroidery machines to make it.

This report presents the results of 20 months of research on the role of digital platforms in the craft sectors of the UK and China.

Digital platforms such as social networks and online marketplaces are key to enabling growth in the Creative Economies and are used across Creative Economy sectors including craft. However, to date there has been a concentration of interest in those sectors which produce or consume digital content. For example, focussing on the 'IT, software and games sub-sector [which] contributes almost 40% of the gross value added (GVA) of the creative industries' (Bazalgette, 2017). Furthermore, when research has been undertaken in the creative industries on the role of digital platforms, it has tended to focus on digital consumption and production. For example, Boston Consulting Group's desk research examined government interventions across the creative industries but focussed on the 'audiovisual, music and video games sectors' (Bazalgette, 2017). Research on these digital sectors of the creative economy has also examined the similarities and differences between countries. For example, Morrow (2016) discusses the evolutionary processes in the new music economies within Europe, America and Asia. However, there is a lack of research on digital platforms for creative industry sectors which produce physical objects such as the craft sector.

To address this gap in research on digital platforms in the creative economy this report maps out the use, features and potential of digital platforms in craft sectors in the UK and China. The UK and China are examined because craft practice is inevitably shaped by culture and context (Howe and Dillon, 2001; Zhan et al., 2017), and learning best practice in craft from different countries could help catalyse new opportunities and ideas from each other. China and the UK are chosen because there are deep-rooted differences in culture and heritage between China and the UK, which would affect conventions and methods of creative production and consumption and would make different use of digital platforms to support them. Moreover, there are significant differences between countries' internet infrastructure and policies of use which would impact how digital platforms can be used for craft.

The broad research question explored in this report is:

How are digital platforms used and what value do they generate for the craft sector in the Creative Economies of the UK and China given the different cultural heritages and divergent contemporary digital culture, regulation, and infrastructure.

Learning best practice in the use of digital platforms for craft from different countries could help catalyse new opportunities and ideas from each other. Therefore, questions we addressed in this report about the role of digital platforms in the Creative Economy, specifically craft sectors include:

What digital platforms are used in the UK and China, and what are their features?

How are these digital platforms used in the UK and China? What is similar? What is different? What challenges are encountered with their use?

What opportunities are generated through the use of digital platforms?

How is IP secured and exploited through digital platforms? How is this different in the UK and China?

What are the similarities and differences between rural and urban uses of digital platforms? How are these different between the UK and China?

How might craft sectors in the UK and China better leverage digital platforms to sustain and grow their activities in Creative Economy?

2.2 Research methods

The research was undertaken by a multi-disciplinary team of academic researchers from Queen Mary University of London (UK) and Hunan University (China). Mixed methods research was described in Chapter 4 was undertaken as illustrated in Figure 2.1 to: 1) understand uses of digital platforms; 2) identify challenges of using digital platforms; and 3) propose recommendations.
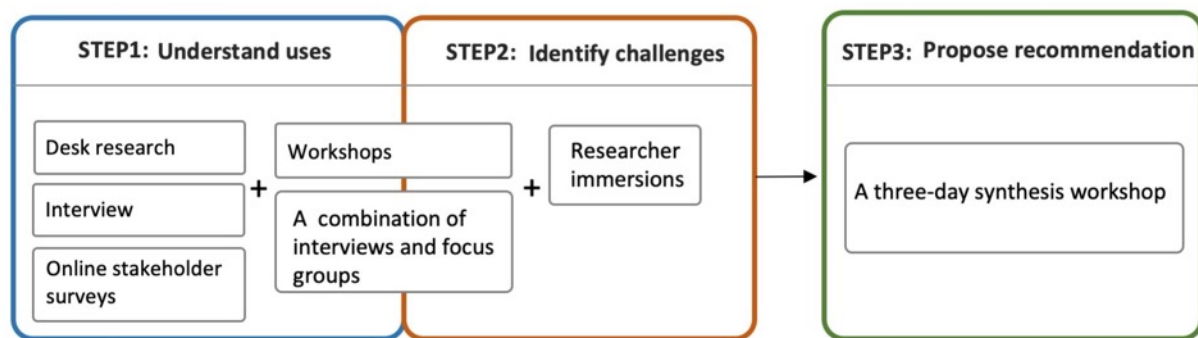

Figure 2.1 Project data collection and analysis

Desk research was used to understand the craft sector and digital platforms and to collect secondary data to prepare topics for interviews and surveys. Interviews and surveys were used to gather stakeholders' experiences and views regarding the features and uses of digital platforms for craft and to recruit participants for in-person workshops. Workshops, interviews, and focus groups were conducted respectively in the urban and rural areas of the UK and China to further identify uses, challenges, and opportunities for digital platforms for craft. Researcher immersions then gathered in-depth, hands-on knowledge of how digital platforms are used in practice in order to root reported case studies in real-world experience. Finally, a three-day synthesis workshop was held in China in which the research teams from the UK and China worked together in-person to undertake intensive analysis and synthesis of all the data. This workshop generated insights and shared understandings between China and the UK on the uses, challenges, trends, and potential of digital platforms for crafts sectors documented in this report.

2.3 Structure of the report

This report summarises the full set of evidence gathered in the research process. Chapter 3 provides background and context to the project drawing on literature about craft and digital platforms. Next is the methodology chapter which presents the methods used to collect data in this project along with their rationale. Chapter 5 then contains six case studies each from the UK and China, which present hands-on experience of how digital platforms are typically used for craft. These case studies provide illustrative vignettes of the kinds of use of digital platforms for craft identified in the surveys, workshops, and desk research. Followed this, Chapter 6 summarises the findings from the mixed methods research including current uses of digital platforms for craft, and the challenges, trends and opportunities for using digital platforms in

craft. Chapter 7 presents recommendations for exploiting digital platforms based on the findings of the research, and Chapter 8 concludes the report.

After the main report, there is a series of appendices, which show the full detailed methods and results of the research. Appendix 1 provides a detailed literature review which is summarised in Chapter 3. Appendix 2 summarises the interviews undertaken in the UK and China. Appendix 4 provides details of the data collected in the workshops and focus groups with craft stakeholders. Appendix 5 provides detailed accounts of the researcher immersions summarised in Chapter 5. The findings from data collected in Appendixes 1, 2, 3, 4, and 5 are synthesised in Chapter 6 and used to inform the recommendations presented in Chapter 7.

Chapter 3
Background and Context

This chapter provides context to the project and its findings drawing on desk research of literature to explore the nature of craft, digital platforms, and current digital platforms for craft. It should be read in conjunction with Appendix 1, which provides detailed analysis of the desk research.

3.1 About Craft

At the heart of this project is a deep interest in contemporary craft. The term 'craft' has been used and defined across a variety of disciplines, including the philosophy of art and aesthetics, art history and critique, practices art and design, and sociology to name just a few.

Craft in Europe
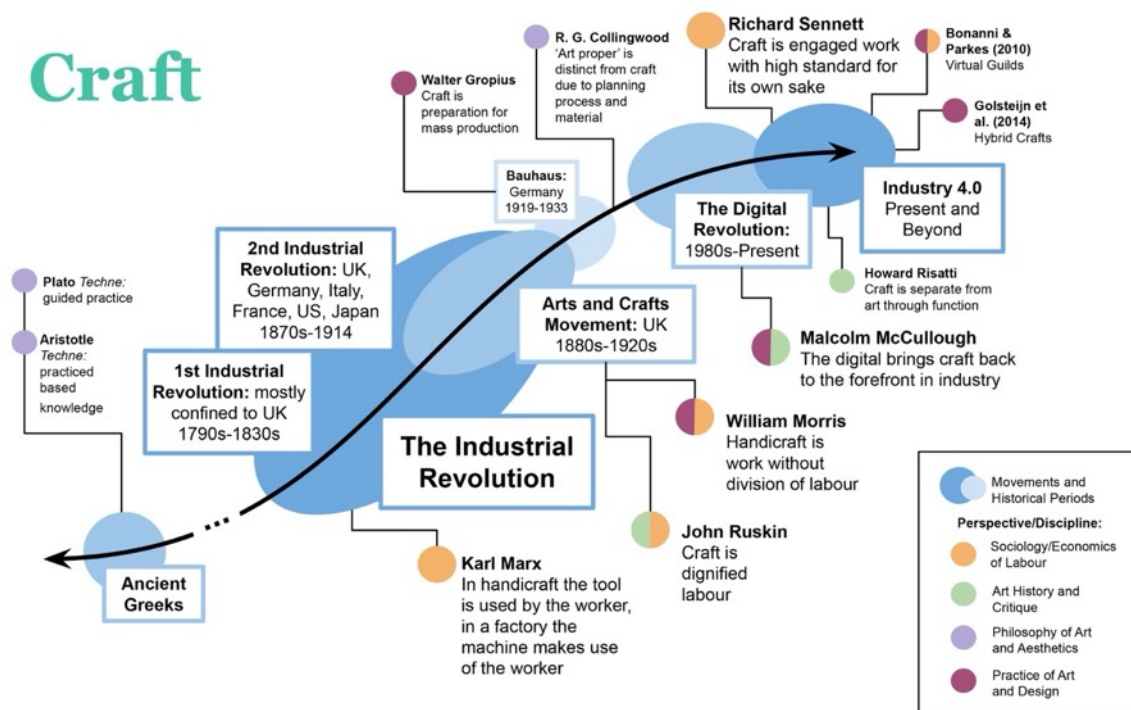

Figure 3.1 A European view of craft

Figure 3.1 summaries an emergent definition of craft by key European figures in terms of critical historical eras and is used as the basis for the understanding of craft in the UK in this report. Craft is often contrasted against 'artistic labour' (Banks, 2010 p.11) as art is perceived as more abstract and creative while craft is process and tool-based. Philosophical understanding of craft and craftsmanship can be traced back to Plato and Aristotle's definitions of techne, or 'practised knowledge' (Parry, 2014). In the Industrial Revolution craft was viewed as a reaction against the process of deskilling and workplace alienation, whilst the Arts and Crafts Movement emphasised the rebirth of craft after the Industrial Revolution as a distinct art form (Adamson,2010). Indeed, Collingwood (Kemp, 2016) sought to distinguish craft from 'proper art' in terms of its planning process and materials.

Most contemporary understandings of craft come from a labour context. Banks (2010, p. 3), for instance, defines craft in the framework of Sennett, and states that craft is 'a form of skilled labour that is quality-driven, materially specific and motivated by internal, as well as external, rewards (Adamson, 2007; Sennett, 2008)'. Bonanni & Parkes (2010) emphasise that the term craft 'encompasses a much broader context than skilled labour and promotes an objective standard of excellence in which craftspeople are shapers of culture, policy, and technology. The

nature of craft is transdisciplinary; it is rooted in emerging materials, technological processes and cultural phenomena, and it is uniquely positioned to reflect new social values.' (p. 180). Conventionally there has been a distinct difference between craft and design in that design involves problem-solving and satisfies a need (Simon, 1969). However, contemporary craft increasingly considers and responds to the needs and requirements of customers, i.e., more personalised and unique products in modern times (Bunnell, 2004).

New terms such as 'digital craft' and 'hybrid craft' have recently been coined to describe craft making process with digital materials or practices. For instance, Malcolm McCullough (1998) investigated the possibility of craft in the digital field and suggested an inclusive definition of digital craft in the computer age is needed.

Craft in China

Figure 3.2 illustrates the development of the Chinese definition of handicraft from ancient China to the present day.
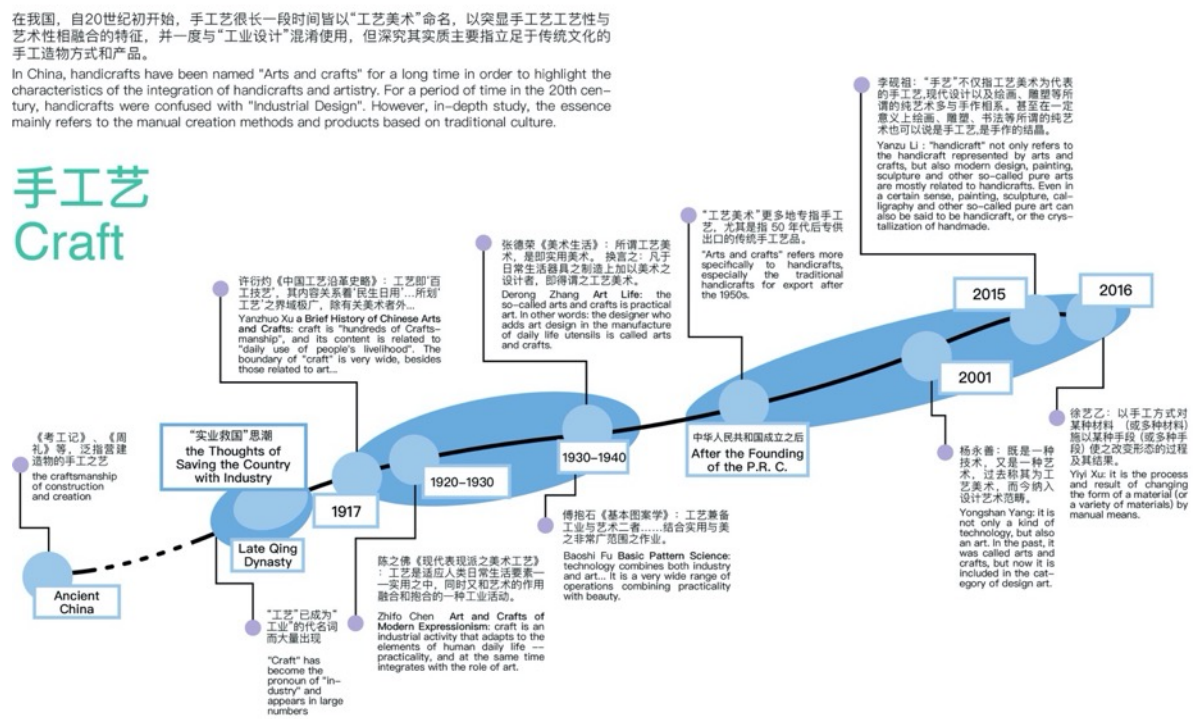

Figure 3.2 The view of craft in China

China has various crafts, and is famous for its long and splendid history and culture in craft. A book called 'The Artificer's Records' (考工记, Kaogongji), which was written in the late years of Spring and Autumn periods (5th - 6th century BC), summarised more than 30 types of work, representing the highest level of human creation activities at that time (Daoyi, 2005). In ancient China, handicraft was usually referred to as 'technique' (技艺), 'design and make' (造作) or 'craftsmanship' (工艺) (Yanzu, 1991, 2002). In modern times, as handmade products have gradually been replaced by machine production, 'craft' (手工艺) now often refers to methods of creation that do not involve mechanisation. With the introduction of the concept of 'fine art' (芸術) from Japan to China, the compound word 'crafts and arts' (工艺美术, Gongyimeishu) was introduced and has gradually become synonymous with handicrafts in industry and education since the beginning of the 20th century, and it still affects people's understanding of handicrafts today. The concept of 'crafts and arts' (Gongyimeishu) includes key aspects of both 'crafts' and

'arts' - the emphasis on handmade methods, manual skills and the artistry of products (Kai, 2009). The earliest use of 'crafts and arts' in China also included the connotations of practical art and modern design (Yuanpei, 1920; Zhifo, 1929; Derong, 1935) and was influenced by the Arts and Crafts movements in Europe.

After the founding of the People's Republic of China, along with the establishment of the Central Academy of Arts and Crafts (the predecessor of the Academy of Arts and Design, Tsinghua), there was an emergence of 'Arts and Crafts Service Departments' all over the country which included the history of Chinese arts and crafts. Arts and crafts industry and guilds also appeared, which became the most important foreign exchange industry in China before the reform and opening up. In the 21st century, the concept of craft has been revisited to not only include the content of traditional handicrafts but also extended to related fields of modern design and art. The key to the contemporary views of craft in China is that handmade characteristics along with humanistic values and the cultural meanings of handmade objects are at the core of Chinese craft (Yongshan, 2001; Yanzu, 2015; Xu Yiyi, 2016). In many ways, contemporary Chinese craft has reemphasised handmade and DIY production, similar to the techniques of the Spring and Autumn periods.

Overall, from the UK and Chinese literature, this report identifies four elements in craft making: i) planning, ii) material, iii) process, and iv) function (Adamson, 2007; Sennett, 2008; Bonanni & Parkes, 2010; Banks, 2010; Kemp, 2016). This report characterises the key features of craft as: **Craft is a skilled activity in which makers plan production, explore materials, and produce functional objects which inherit and embrace cultural meaning.**

3.2 About Digital Platforms

The term 'digital platform' is often ill-defined and there is no consensus on its definition. For Bakhshi (2013), digital platforms help generate new products and services. Digitally native Creative Economy companies make use of these platforms from 'production, where digital tools are transforming the creative process, to distribution (with new platforms) and consumption (devices)' (ibid.). For those concerned with physical objects, especially in the design and craft sectors, digital platforms provide opportunities through the 4th industrial revolution, a digital revolution characterised by a 'fusion of technologies blurring the lines between the physical, digital and biological spheres' (Weiss, 2016). For example, digital platforms provide opportunities for innovation through using new materials and production techniques, they facilitate greater and closer access to markets and customers and provide opportunities to include customers more in the design process (ibid.). Studies of digital platforms tend to describe some characteristics of digital platforms and illustrate these characteristics through a small number of examples (Pilkington, 2017; Ayodeji et al.,2020) rather than defining the term digital platform itself.

In China, digital platform refers to digital technologies that provide people with a physical or online working environment including computer hardware and software for product operation and convenient interaction. This definition may include human elements of online communities themselves as part of the platform, not just the technology.

In this project, digital platform refers to all kinds of use of digital technologies in craft activities, from social media (e.g. Instagram and WeChat) and online marketplaces (e.g. Esty and Taobao) through to digital production tools (e.g. 3D printers and digital software), materials, and even makerspaces.

3.3 Digital Platforms for craft

The desk research identified five categories of digital platforms used in craft: i) Digital technologies; ii) social media; iii) online marketplaces; iv) digital software; and v) others- e.g., online communities.

Digital technologies used in craft

Digital technologies such as 3D printing and laser cutting have been gradually applied in craft-making practice. According to a major survey of contemporary craft in the UK (crafts council, 2012), 57% makers (over 2,000 participants) have used digital technology in some form in their designing or making progress. In addition, the survey noted that laser cutting machines and 3D printers are available at universities and colleges and are being embraced by the next generation of craftmakers. These technologies make it much easier and quicker to replicate production in makers' work.

An increasing number of studies and exploratory research on the combination of digital technology and techniques with craft have also been carried out. For instance, Blauvelt et al. (2000) explore how computation and craft can be integrated, and Philpott (2012) explores how AutoCAD® / CAM technologies are incorporated into origami and textile making. McCullough (1998) claims that 'Partnership with technology are better than autonomous technology', which reflects how digital technologies have influenced and somehow changed ways of craft making.

The desk research identified that digital technologies are more likely to be used in textile, ceramics and jewellery. However, there is little research which investigates the challenges regarding the application of digital technologies to craft.

Social media used for craft

Instagram, Facebook, Twitter and other social media platforms are embraced by craftmakers, which play an essential role in makers' daily activities. The survey of contemporary craft in the UK (crafts council, 2012) noted that about 7% of retailers made sales through social media. Luckman (2018) found that craftspeople (in Australia) believe that an online presence through social media is the 'norm' and is necessary to their craft business. Many middle-class makers claim that they would hire a social media coordinator if possible. This indicates that social media is useful for craftmakers, but it may be difficult for makers to manage their social media especially if they have multiple social media.

Yair (2012) summarised five keys that social media could potentially benefit to the crafts sector: i) Selling. It creates new potential for craft e-commerce; ii) Adding value. It can be used to reveal the hidden stories behind the craft object and its maker; iii) Building audiences; iv) Positioning to find new professional and creative opportunities; and v) Networking to share information and resources and promote creative, collaborative opportunities.

Overall, it is noticeable that social media have a significant impact on the development of the craft industry, although the primary origin of social media is not for craft. Further studies on topics such as comparing different types of social media for craft activities and identifying challenges for makers to master the skills of using social media are needed.

Online marketplaces for craft

Online selling can be an indispensable part of selling channels for craftmakers in the digital age with 35.5% of makers (over 2,000 participants) using online methods for selling based on the major survey of contemporary craft in the UK (Crafts Council, 2012). However, only 7% stated it was their most important selling route (ibid.). The study also noted that craftmakers in Scotland were more likely to use internet selling channels than in the UK.

There are two main forms of online marketplace used by craftmakers: i) the maker's personal website, and ii) shared online platforms. Many makers have a personal website and have found their own website to be their most important online sales channel (Crafts Council, 2012). A popular shared online marketplace in the UK is Esty (Luckman, 2013; Krugh,2014), where craftmakers and sellers can create online marketfronts from their own home. It is worth noting that Esty has been regarded as a twenty-first century craft movement by Krugh (2014), as it fulfils some of the original ideals of the Arts and Crafts movement by bringing workers in direct contact and control of their work and business. Indeed, Bonanni & Parkes (2010) claim that Esty is also a virtual guild because it also offers crafts makers the opportunity to find rare materials and tools that allows them to create unique pieces.

In China, handicrafts have moved from 'nostalgia' to 'daily life' - more than 70% of the 1128 Chinese time-honoured brands identified by the Ministry of Commerce have now opened online stores in Taobao and Tmall. According to the national intangible cultural heritage list of the Intangible Cultural Heritage Department of the Ministry of culture, nearly 50% of the intangible cultural heritage crafts are now available on Taobao, and Taobao businesses engaged in the intangible cultural heritage production are located all over the country.

Online sales will bring makers more selling opportunities, but may also have unavoidable challenges. For instance, a significant disadvantage of the online market is that products are untouchable whereas most customers are likely to want to touch a physical object before they make a purchasing decision. Customers may decline to buy expensive craft items online due to such uncertainties. It is necessary to understand the potential challenges for makers to use the online marketplace and seek some possibilities to address those difficulties.

Digital software for craft

Software such as Adobe® Photoshop and Adobe® Illustrator can facilitate craft activities. For example, Adobe® Photoshop can be used for designing posters for craft exhibitions. Craftmakers can also use Adobe® Photoshop to optimise their craft pictures before posting on social media. Currently, there is little research focussing on exploring what and how digital software can be applied to craft.

Other forms of digital platforms for craft

There are some online communities which have emerged for craft and which are not categorised as social media or online marketplaces in this report. For example, Instructables[1] is a community platform for people who like to make things. It makes easy for people to learn how to make anything by providing step-by-step instructions. People can explore, share and make projects range from craft to cooking. Classes and teaching are also offered. Indeed, the boundary between social media, online marketplaces and communities tend to be blurred. Many digital platforms integrate networking, sales or collaborations together in order to meet the demand of the craft industry. Esty, as mentioned earlier, is not only an online marketplace for makers to sell, but also a place for makers to network (Etsy blog) and buy materials. To some extent, the website of Crafts Council (it is the national development agency for contemporary craft in the UK) can be viewed as a digital platform for craft as it includes shops, a directory (which introduces craft projects and makers), and its own magazines, etc.

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[1] https://www.instructables.com

Chapter 4
Methodology

Mixed methods research including desk research and online stakeholder surveys, workshops, and a combination of interviews and focus groups, and researcher immersions, were used to understand use, identify challenges and propose recommendations concerning the application of digital platforms for craft over the 20 months of the project as illustrated in Figure 4.1.
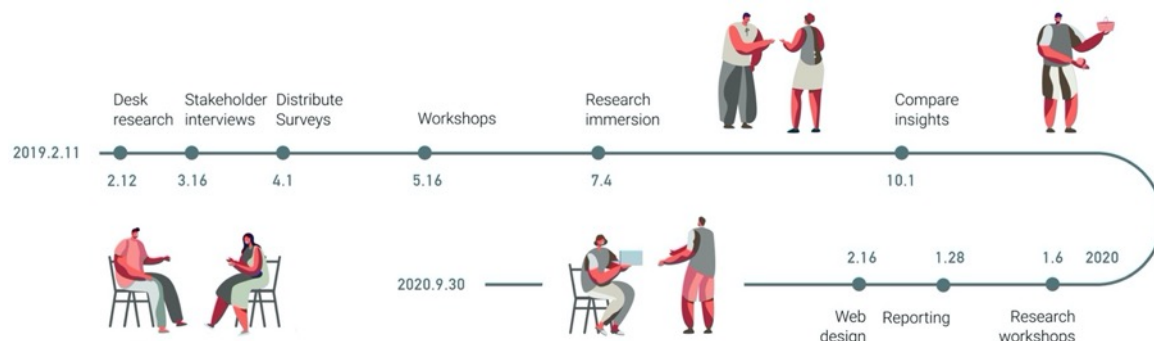

Figure 4.1 Research process and methods

4.1 Methods

Desk research (see Appendix 1 for details) used the 'snowball' method to understand the craft sector as well as digital platforms, and to collect secondary data to prepare and complement uncovered topics in surveys.

Interviews and surveys (see Appendix 2 and 3) were used to gather stakeholders' experiences and views regarding the features and uses of digital platforms for craft and recruit participants in workshops. For ease of completion, most items in the survey consisted of closed questions with a small number of open questions so that the survey could be completed in less than 10 minutes (see survey in Appendix 3). The survey was disseminated in the UK and China through craft organisations including the Crafts Council and social media such as Twitter in the UK and WeChat in China. In the UK, 54 craft stakeholders responded to the survey including makers (n=46), manager/ curator (n=6), retailer (n=3), researcher/ educator (n=4) and restorer (n=1) in the UK. Among the respondents, approximately 75% of the respondents had over five years' work experience in craft sector. In China, 34 craft stakeholders participated in the survey. Some of them held multiple roles in craft sector, mainly including designers (71%), consumers (44 %), producers (38%) and researchers (38%).

Figure 4.2 workshops' participants from China (left) and the UK (right)

Stakeholder workshops (see Appendix 4) were conducted in the urban areas of the UK and China illustrated in Figure 4.2 to further identify uses, challenges, and opportunities for digital platforms for craft. The workshop facilitation team included three professors, three lecturers, three researcher assistants, and two postgraduate students. The workshop schedule included

sharing of craft projects involving digital platforms for design, and group discussion about digital platforms for craft to identify uses, challenges, and opportunities. Participants were recruited from online surveys and networks. Ten participants attended the UK workshop including makers, professors, and researchers. All the UK participants volunteered their time to participate. To increase participation of craftsmakers from across China, the Chinese team paid participants in China 1000RMB as an incentive to participate. 20 participants including makers, managers, designers, researchers and stakeholders, attended the workshop in Changsha, a city in China.

In addition, interviews and focus groups were undertaken in rural areas of the UK and China to broaden participation in the research beyond urban centres. In the UK we interviewed three participants including a lecturer, makers, and a gallery manager in Farnham. Similarly, focus groups and interviews were undertaken in remote areas of Hunan Province, China, including Tongguan Kiln Ceramics, Hunan Arts and Crafts Vocational College, and Yiyang Xiaoyu Bamboo art (Figure 4.3).

Figure 4.3 Studios visited in rural areas of China during data collection

Researcher immersions (summarised in Chapter 5 and detailed in Appendix 5) were undertaken to gain in-depth, hands-on knowledge of how digital platforms are used for craft. Locations included the following in London (UK), Hand & Lock, Tatty Devine, Clockwork and The Pavilion studios as illustrated in Figure 4.4.

Figure 4.4 Studios visited during UK researcher immersions

They provide illustrative vignettes of the kinds of use of digital platforms used in craft identified in the surveys, workshops, and desk research. The data collection was structured using a template to record and categorise observed data (see Appendix 5 for details) including identifying craftmakers' uses of digital platforms, pictures and descriptions of their work, digital touchpoints, descriptions of typical craft activities, and so on. The researchers from the UK and China both visited six craft sector stakeholders to create in-depth cases the use of digital platforms in craft sectors. Some makers were recruited from workshops, and others were contacted through online searches and by email invitation.

To conclude the data analysis a three-day synthesis workshop was held in China with the UK and Chinese research teams as illustrated in Figure 4.5. In the workshop, the researchers undertook intensive analysis and synthesis of all the data to generate insights and shared understandings between China and the UK on the uses, challenges, and potential of digital platforms for crafts sectors. The synthesised findings are reported in Chapter 6.
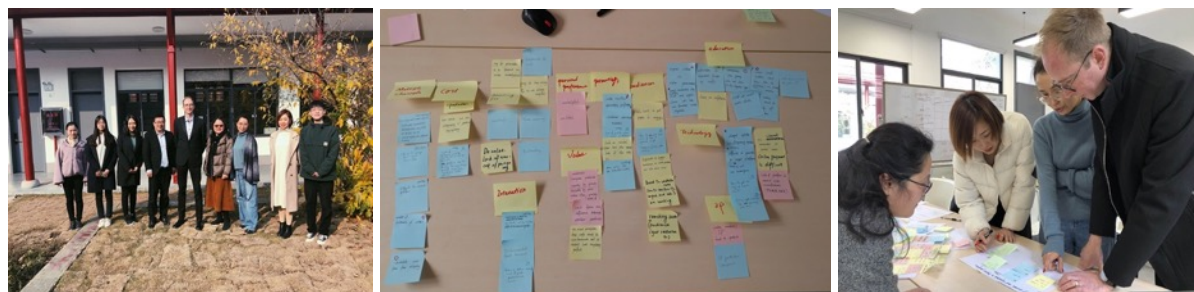

Figure 4.5 A three-day synthesis workshop in China

4.2 Reflection on the research methods

One advantage of mixed methods for data collection is it extends the data sources and ensures data saturation. Desk research and online survey provided a broad understanding of digital platforms and craft. The workshops and the combination of interviews and focus groups provided first-hand data regarding the uses, challenges, and opportunities for digital platforms for craft in the urban and rural areas of the UK and China. However, the workshops were necessarily limited in size and participants were self-selecting meaning that there was not a chance to recruit a balanced and representative cross-section of craft stakeholders.

Researcher immersions further explored these issues and gathered in-depth data that may not have been recognised during the workshop. For example, during researcher immersion, one maker mentioned that she got external help from her friend instead of outsourcing to make an excellent personal website, which she did not mention during the workshop. Also, researcher immersions offer researchers an opportunity to visit makers and take photos in their studio, which offers a chance to collect more grounded data. For the final data analysis workshop, the research team physically gathered together to share, compare and analyse data. Face-to-face communication is essential for cross-cultural research, especially during an extended data analysis stage.

The main disadvantage of the research methods used in this project is that it can be difficult to recruit participants, especially makers, as attending those activities will prevent them from making and cost them their valuable time. For this reason, the original plan for the workshops in the rural areas of China and the UK had to be modified into a combination of interviews and workshops. Compensating makers for their time is important, either in terms of financial incentives, or providing some added value such as digital training and networking to encourage them to take part in the research. The difficulties in recruiting participants also led to limitations in our data sampling. Specifically, it was challenging to cover all types of craft both countries, and as the UK and China have different types of craft care needed to be taken to sample from comparable craft sectors. Therefore this project focussed on representative and accessible participants and crafts.

The researcher immersions are a form of quick ethnography which offered an insight into the use of digital platforms in craft making. However, they were not as in-depth as, for example, longitudinal ethnographic studies which could have captured how digital platforms are used in craft practice over extended periods. Given this limitation the researcher immersions should be

considered as snapshots of the role of digital in craft making rather than capturing makers' whole making processes which are typically several months long.

Last but not least, whilst the UK and Chinese researchers worked together to collect and analyse the data of project, and it was not possible to bring the UK and Chinese craftmakers together to share their experiences directly. This may offer greater opportunities for reflections and contrasts between the two countries, although care would need to be taken to address language barriers between the two countries.

Chapter 5

Case Studies

Researchers from the project team visited six craft sector stakeholders in both the UK and China to undertake in-depth researcher immersions to better understand the real-world use of digital platforms in craft sectors. Some makers were recruited from workshops, whilst others were contacted through online searches and email invitation. From these researcher immersions, a set of illustrative case studies on the use of digital platforms in contemporary craft practice are presented here and detailed in Appendix 5. These case studies also provide illustrative vignettes of the kinds of use of digital platforms identified in the surveys, workshops, and desk research. The data collection in the researcher immersions was structured to record and categorise observed data including identifying craftmakers' uses of digital platforms broken down into descriptions of the making studio, personal story, pictures and descriptions of their work, one piece of their craftwork's making journeys, digital touchpoints, and descriptions of typical craft activities. See Appendix 5 for details of the data collection template.

Each case study summary presented here includes an illustration of the digital touchpoints typically involved in the craft process to give a sense of how digital platforms touch on every stage of craft from inspiration to sales.

5.1 Case studies in the UK

In the UK, two craft companies (Hand & Lock, and Tatty Devine) and four individual makers (Bridget Bailey, Maria Sigma, Elizabeth Renton, and Jeremy Nichols) in the researcher immersions – see Table 5.1 for an overview. Digital platforms have been widely used in the Hand & Lock embroidery studio and the jewellery company Tatty Devine. For instance, machine embroidery has become an indispensable part of Hand & Lock's business, which includes the use of digital software - Adobe® Illustrator digital embroidery machine and Wilcom embroidery software in designing and making process. Similarly, Laser cutters are the main equipment for Tatty Devine to cut jewellery parts and make them ready for hand assembly (Figure 5.1).

Figure 5.1 Digital embroidery machine, 'Wilcom' embroidery software, and laser cutter

In terms of individual makers, Maria Sigma, for example, is a young and representative weaver whose making processes are greatly facilitated by digital platforms. Firstly, design software such as Adobe® Photoshop and Adobe® Illustrator assist in the presentation of her craft. Secondly, computer-assisted loom and related Weavepoint software are used in her making process (Figure 5.2).

Figure 5.2 Design software, computer-assisted loom, and Weavepoint software

As a further example of digital platforms use in craft, Maria's personal brand website, newsletters, and social media, including Instagram, have become indispensable for advertising workshops, exhibitions and her work. Her computer and the Internet are essential for Maria to send emails, deal with photos and design descriptions, and keep in touch with customers all over the world (Figure 5.3).
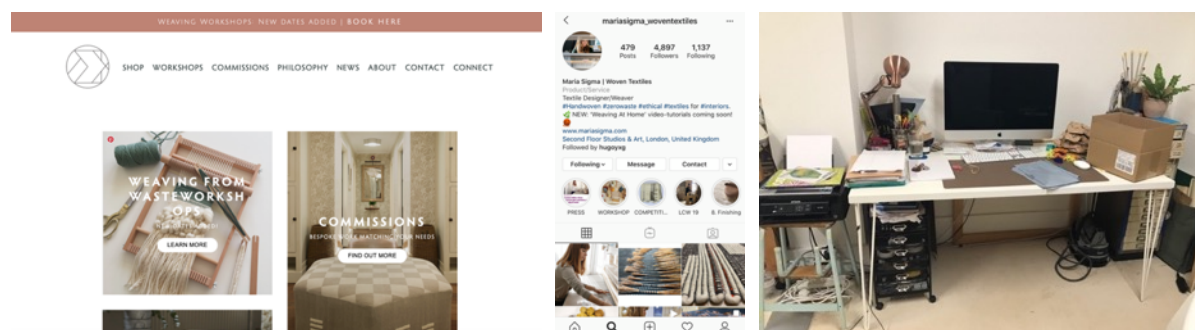

Figure 5.3 Maria's website, Instagram page, and computer in her studio

Table 5.1 summarises the case studies of digital platforms for craft in the UK following the creation, production, dissemination and consumption stage, which is extracted from the cultural cycle (UNESCO-UIS, 2009). A brief introduction to every case study is presented here, and the detailed description of each case study can be found in Appendix 5.

Table 5.1. A summary of using digital platforms for craft in the UK' s researcher immersions

	Creation	Production	Dissemination	Consumption
Hand & Lock	Digital design software e.g., Adobe® Illustrator	Digital embroidery machine 'Wilcom' embroidery software	Online store Facebook & Instagram for promotion and sale	Website and emails to co-design with customers
Tatty Devine	Digital design software e.g., Adobe® Illustrator	Laser cutting	Online store Instagram & Facebook for advertising and sale	Personalisation of names in jewellery (online and in store)
Bridget Bailey	Capture photos by iPad for inspiration	-	Website Instagram for advertising	-
Maria Sigma	Digital design software e.g., Adobe® Illustrator Adobe® Photoshop	Computer-assisted loom and related Weavepoint software Computer and Internet to deal with photos and design description	Website Newsletter Instagram for advertising	Emails to connect with customers who request commissioned work
Elizabeth Renton	-	Electronic Kiln Learn making skills on YouTube	Website Instagram for advertising Use Mobile phone and computer to deal with craft activities, e.g., apply for exhibition	-
Jeremy Nichols	-	3D printing to make moulds for teapot handles	Website Facebook & Twitter for promotion	-

Brief introduction

Hand & Lock have 250 years' experience embellishing, embroidering and monogramming garments for the Royal family, the military and fashion houses including Dior, Hermes and Louis Vuitton. It offers a wide range of services, including monogramming, embroidery pop up and events, foil embossing, bridal embroidery, goldwork, military and ceremonial, bespoke embroidery, personalised clothing, machine embroidery, interior design embroidery, hand-guided machine, flags and banners, and emoji monogramming.

Highlights

o   Hand & Lock embrace computer-controlled machine embroidery and sustain traditional embroidery techniques

o   They apply digital technologies and software to facilitate the hand-making processes and reduce mistakes

o   Many sales are generated from Hand & Lock's website, although the services and products are not directly sold through the website

o   Social media including Facebook and Instagram are used to attract customers and attract the public's attention to their products and services

Digital touchpoints

Figure 5.4 summarises some of the key digital touchpoints found in Hand & Lock, which provide both a digital embroidery service and a very traditional hand embroidery service. Digital technologies and software have been widely applied to facilitate making, minimise mistakes, and to present their work visually to customers beforehand. Many sales are generated through their website, and they try to make it the best and user-friendly website. In addition, Hand & Lock attract more customers and raise more public attention through social media.
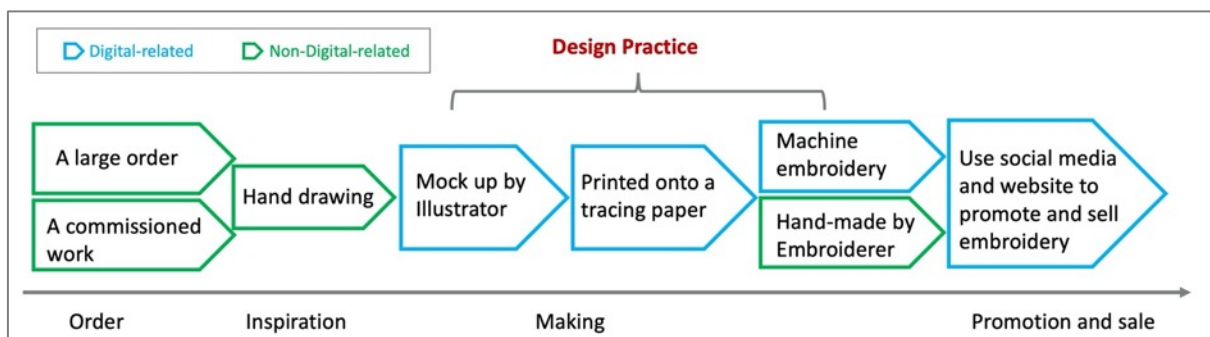

Figure 5.4 Digital touchpoints used in Hand & Lock

Brief introduction

Tatty Devine is the world's go-to brand for original and fun statement jewellery. Born in 1999 in the heart of East London by founders Harriet and Rosie, their jewellery soon achieved a cult following with fans. All Tatty Devine jewellery is designed and handmade in house by a small, skilled team of ten makers with a passion for art jewellery. Laser cutting technology is widely used in their making process. Alongside the Classic and limited edition and seasonal 'capsule' collections, Tatty Devine love to collaborate with artists, designers, charitable institutions and their favourite cultural spaces. With social media such as Instagram and Facebook, Tatty Devine promote their jewellery and interact with their followers all over the world.

Highlights

o   Making iconic laser cut acrylic (plastic) jewellery since 2001

o   Using laser cutters Tatty Devine's personalised name necklaces become their bestseller

o   Promoting products across all major social media including Instagram and Facebook

o   Producing around 300 designs each year, and have a cult following

Digital touchpoints

Tatty Devine is the first brand to create name jewellery by laser cutting, and their fonts are self-designed, making them unique. All pieces of jewellery are designed by Harriet and drawn by hand, and then the design assistant digitalises them and makes samples. The use of digital software is an integral part of the design process. Social media and newsletters sent to 40,000 subscribers are Tatty Devine's major platforms to promote their products. They use all the major social media platforms, and post different contents to different platforms in order to attract more people. They find that podcasts are a useful way for them to share and improve their work.
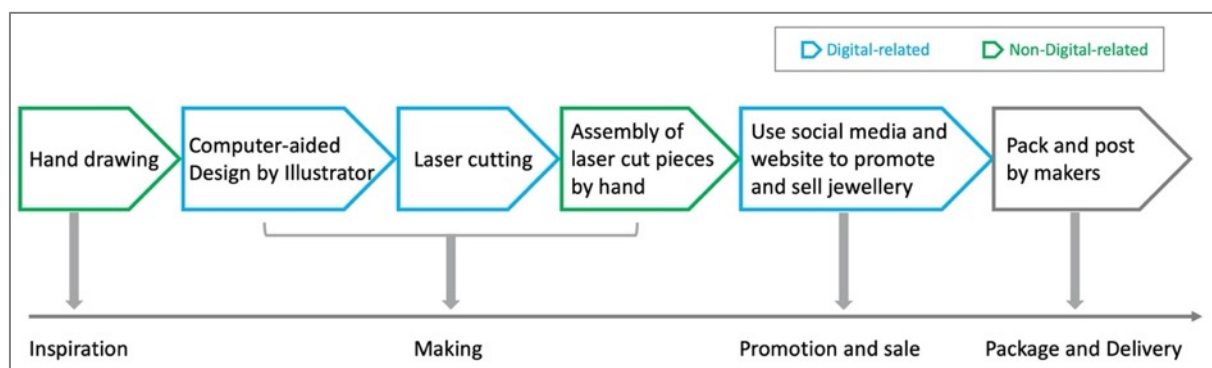

Figure 5.5 Digital touchpoints used in Tatty Devine

Brief introduction

Bridget Bailey is a conceptual milliner and textile artist, specialising in millinery, jewellery and artworks. Bridget has designed collections for labels such as Mulberry, Saks Fifth Avenue and the V&A and shown at recent high-profile exhibitions, including Mad for Tea at Fortnum and Mason, and 'Crafted' Makers of the Exceptional at the Royal Academy. She teaches masterclasses in millinery and textile techniques both at the studio in London and at selected venues abroad. She uses an iPad, the Internet, and social media in her daily craft activities.

Highlights

o   Uses social media: Instagram, Facebook and Twitter to promote her craft activities

o   Shares aspects of her life as a maker with Instagram followers to attract their attention

o   An iPad plays an important role in her craft such as recording inspirations

o   The Internet is very helpful to attract students from abroad to attend her craft courses

Digital touchpoints

Bridget uses digital platforms throughout her craft activities (Figure 5.6). She uses the iPad to take photos when she seeks inspirations from nature. Social media such as Instagram and Facebook help her promote and sell her craftwork. She has different strategies regarding posting on Instagram, where she shares her craftwork, her making the process, and even her daily life such as a picture of her breakfast with her followers. It helps her to promote her work and attract more students. She also uses digital software, iMovie, to make videos to better present her work.
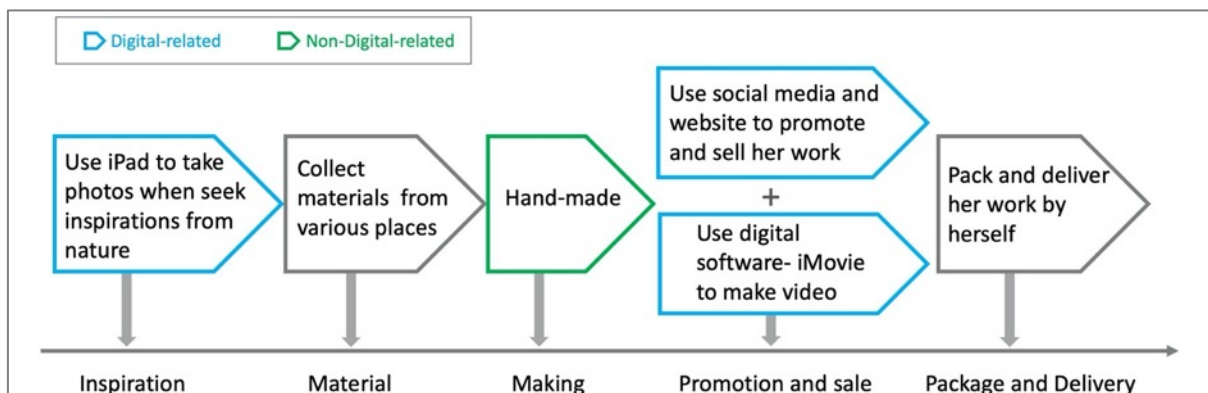

Figure5.6 The digital platforms involved in Bridget's craft activity

Brief introduction

Maria created Maria Sigma | Woven Textiles, an award-winning textile brand specialising in 'zero waste' ethical hand-woven textiles for interiors based in London. She loves textiles, so she moved from Greece to London and completed a degree in Textile Design at Chelsea College of Art and Design in London. In 2017, she secured investment support from The Prince's Trust and Virgin Start-Up Scheme. With their support, she invested in a new floor loom which has embedded computing and weaving software in a studio space in East London.

Highlights

o Computer-assisted loom and related Weavepoint software are used in textile making process

o Design software such as Adobe® Photoshop and Adobe® Illustrator assist in the presentation of her craft

o Maria's personal brand website, newsletters, and social media, including Instagram, have become indispensable for advertise workshops, exhibitions and her work

o Most of her digital skills are self-taught

o Computer and Internet are essential for Maria to send emails, deal with photos and design descriptions, and keep in touch with customers all over the world

Digital touchpoints

As shown in Figure 5.7, a computer loom, computer, website, social media, and digital software are used by Maria in her studio throughout the making process. Although her textiles are hand-made, digital platforms are now key to facilitating her making process.
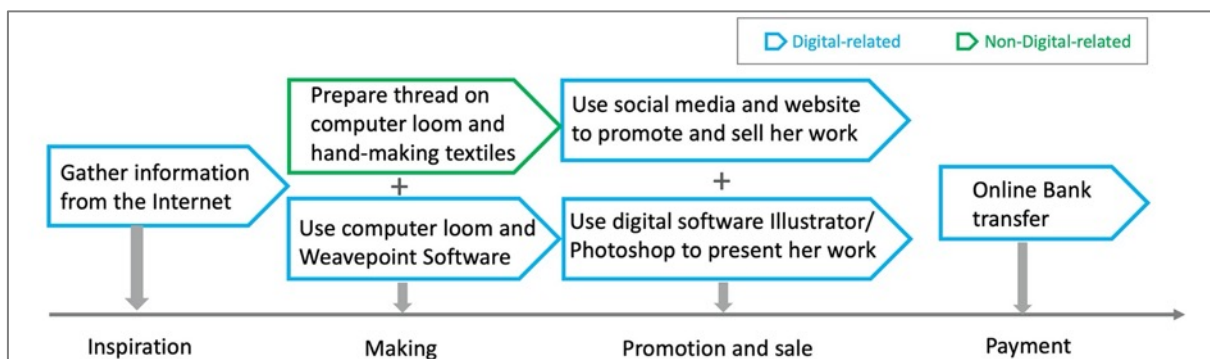

Figure 5.7 Digital touchpoints used in Maria's studio

Brief introduction

Elizabeth is a ceramic artist living and working in West London. Her work draws inspiration from a diverse range of sources, including industrial and farming architecture and heritage crafts. She used to be a teacher and because of her passion for making and her art background, she has devoted herself to becoming a ceramic artist. She is a well-organised person who comes to her studio every working day and works regularly. She is open to digital technologies and would like to know more.

Highlights

o   A small-sized electric kiln is used in her studio

o   Using social media Instagram to promote her craft activities

o   YouTube is a useful channel for her to learn how to make tea bowls

o   Mobile phone and computer also help her deal with craft activities such as applying for craft exhibitions and writing proposals

Digital touchpoints

Elizabeth uses an Electric kiln, social media (Instagram, Twitter and YouTube), and a payment card reader in her craft activities (see blue boxes of Figure 5.8). She would like to open an online store soon, and is open to digital technologies and would like to know more about them.
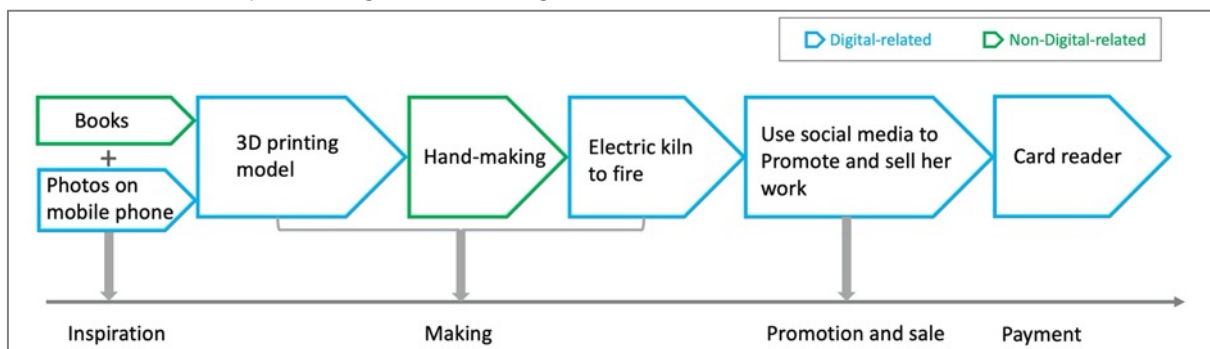

Figure 5.8 Digital touchpoints used by Elizabeth

Brief introduction

Jeremy has a huge passion for making. Making ceramics is Jeremy's third career - he was trained as an aeronautical engineer and worked as a social worker before he devoted himself entirely to making. Jeremy makes salt-glazed domestic pots, specialising in pots for tea and coffee. He thinks it requires a balance between function and aesthetics when making teapots. Also, Jeremy is the chairman of Craft Potters Association of Great Britain.

Highlights

o   Using outsourcing-3D printing to make the model for teapot handles

o   A relatively large electric kiln with a microprocessor controller is used in his making process

o   Mobile phone and laptop are used to deal with emails and other-craft related activities

o   Although he was not born in the digital age, he has social media accounts

Digital touchpoints

Jeremy uses 3D printing (outsourced), an electric kiln, digital camera, and social media, including Instagram, Twitter and Facebook in his craft activities (see blue boxes of Figure 5.9). He also has a mobile phone and a laptop. He thinks that social media could help him promote craft business. One thing that should be noted is there is no internet in his studio due to its location, which is close to a rural area.
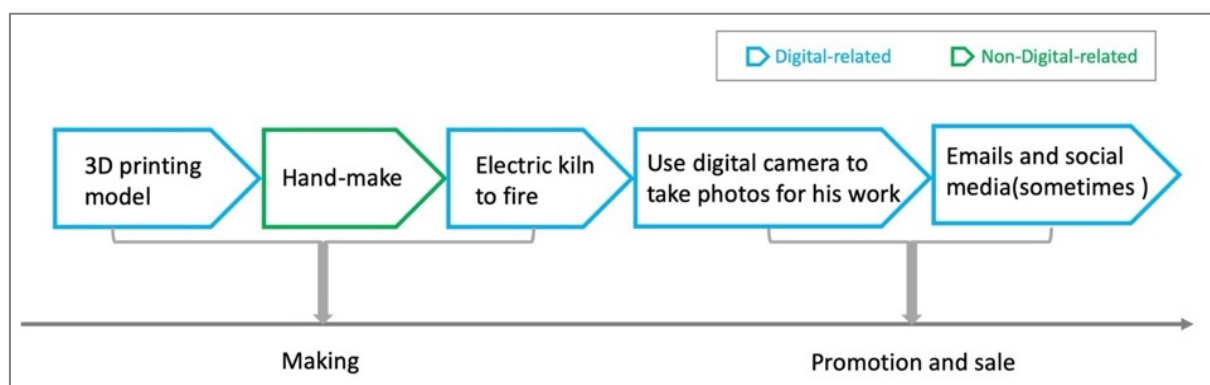

Figure 5.9 Digital touchpoints used by Jeremy

5.2 Case studies in China

In China, our researchers visited five craft studios (Li Yan Xiang Embroidery Art Studio, Daxi Leather Studio, Blue Wood Studio, Tatara Pyrograph Studio, and The Jewellery and Metals Studio in Shanghai University) and observed an online embroidery skill competition run by the Hunan Embroidery Research Institute. Digital software and production have become popular among all the participants' craft activities. For instance, Li Yan Xiang Embroidery Art Studio uses Adobe® Illustrator, Adobe® Photoshop and AutoCAD® software in the creative design stage, and laser carving and scanning are used to facilitate making. Most of their embroidery work is ingenious combinations with products such as notebooks and lamps, which not only help them win customers but are also a fantastic way to revive traditional embroidery (Figure 5.10).
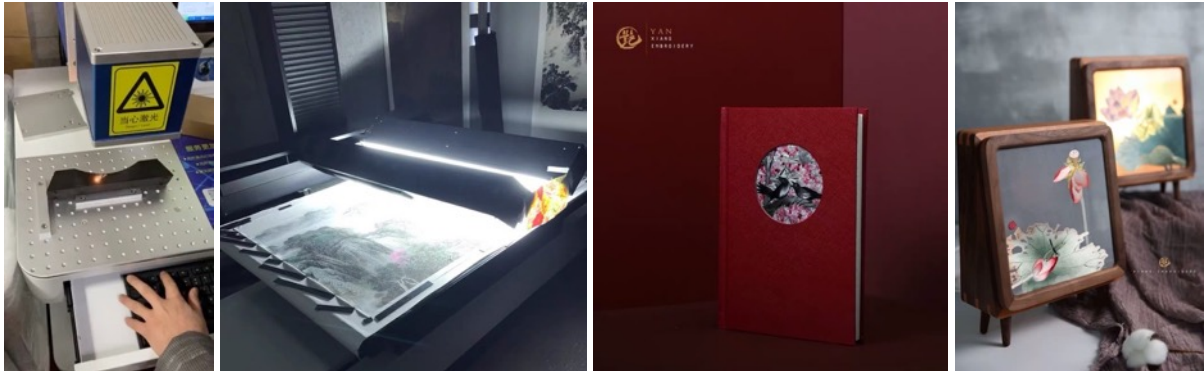

Figure 5.10 The use of laser engraving and digital scanning, craft work-notebook and lamp in Li Yan's studio

Social media and online marketplaces have greatly helped craftmakers in China to promote their craft businesses. A very interesting example is the online embroidery skills competition run by Hunan Embroidery Research Institute which illustrates how digital platforms especially live streaming (an emerging digital platform) could be used in promoting craft (Figure 5.11). Mobile phones were used to record inspiration and facilitate living streaming during the competition (see Figure 5.12). Audiences could witness the whole design and making process and more importantly, had an opportunity to gain a deep understanding of the design and making skills of craft. This kind of approach can help to promote craft to new audiences and create business opportunities for makers.

Figure 5.11 online embroidery skill competition held by Hunan Embroidery Research Institute

Figure 5.12 Competitors use mobile phone take pictures and live broadcast

Table 5.2 summarises the case studies of digital platforms used for craft in China. A brief introduction and highlights of every case are then presented along with diagrammatic summaries of digital touchpoints. Detailed descriptions of these case studies can be found in Appendix 5.

Table 5.2 A summary of using digital platforms for craft in China's researcher immersions

Name	Creation	Production	Dissemination	Consumption
Li Yan Embroidery Art Studio	Digital design software: Adobe® Illustrator, Adobe® Photoshop, AutoCAD®	Some embroidery products are manufactured by the factory including Laser engraving, digital scanner. etc	Online store: Taobao, WeChat, JingDong The use of WeChat, TikTok in advertising	Laser engraving of names for commission
Daxi Leather Studio	Digital design software: Adobe® Illustrator, Adobe® Photoshop, AutoCAD®	Moulds are factory made using digital equipment	Online store: Taobao, WeChat WeChat and Live Broadcast used for advertising	N/a
Blue Wood Studio	Digital design software: SketchUp, AutoCAD®, Adobe® Photoshop	Laser cutting machines, CNC machines	The use of WeChat in advertising and selling	N/a
Hunan Embroidery Competition	Use WeChat and website to recruit contestants	N/a	The use of WeChat, Website, Dongjia APP in advertising and promoting the competition	N/a
Tatala Pyrograph Studio	Graphics tablet, iPad, mobile phone, photoshop	Digital printing press, laser lettering	Online store: Taobao, WeChat WeChat for advertising	N/a
The Jewellery and Metals Studio in Shanghai University	Digital design software: Adobe® Illustrator, Adobe® Photoshop	Mass-produced products are manufactured by the factory using digital equipment	The use of WeChat, website for advertising	N/a

Brief introduction

Li Yan is a master of Chinese arts and crafts and a representative inheritor of the intangible cultural heritage of Hunan Embroidery. Three of her works are on display in the Great Hall of the People, Beijing. The work has been given many times as a national gift to foreign heads of state who have visited China, and has won the highest award of arts &crafts (Gongyimeishu) in China, the Baihua Award(百花奖). Li Yan's studio follows two paths: one is collectable products and the other is industrialized embroidery products. Among them, Li Yan is responsible for the production of collectables, which often takes several years to embroider into a single piece. Li Yan's daughter Chang Ni and Chang Ni's husband are mainly responsible for industrialized embroidery products.

Highlights

o They believe that they benefit from the reputation and yet are limited by tradition such as materiality, form, audience, etc.
o Li Yan Studio actively promotes its products in WeChat
o 'Li Yan' is a relatively well-known brand in the Hunan embroidery industry and the wider handicraft industry, and so there are many digital platforms that actively seek cooperation
o Chang Ni, majored in product design, and Chang Ni's husband is good at production and promotion. Therefore, Li Yan's studio benefits from the combination of traditional embroidery skills and modern innovation design

Digital touchpoints

The production process is purely manual. But before embroidery, some digital equipment such as iPads are used for hand-drawn patterns, illustrations, and so on, and mobile phones are used for taking pictures and videos. Chang Ni said, 'When I make a product, I usually consciously take pictures of some processes'. A German non-contact scanner is used to scan the hand-drawn patterns to get a high-resolution digital version of the picture, which is then printed as a pattern on the fabric with digital equipment. They also use some digital technologies such as laser lettering for custom service. Moreover, WeChat, WeChat public account, and TikTok, are used for promotion. Besides Taobao stores, the studio has cooperations with other platforms such as JD.com's official flagship store of China Industrial Art (China Arts & Crafts (Group) Company) and ICBC's e-commerce shopping platform.
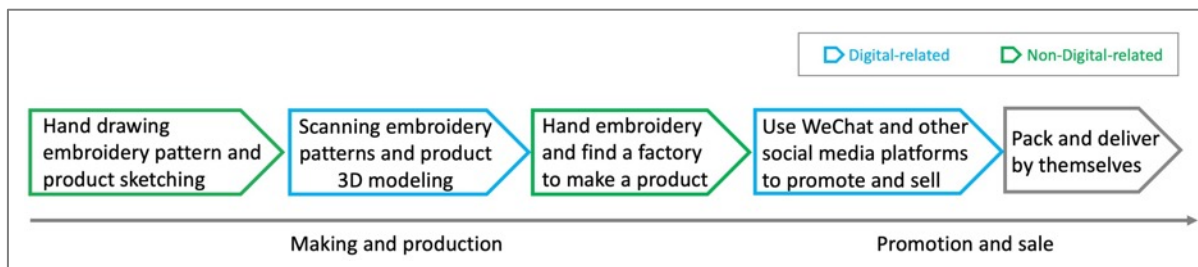

Figure 5.13 Digital platforms involved in Li Yan Embroidery Art Studio making and marketing

Brief introduction

Daxi Leather Studio was established in 2015, located in Bolinjingu District, Changsha. The founder Hong Daxi graduated from the Architectural Design Department of the Chinese Academy of Art, and is a member of the Young Craftsmen Alliance. Hong Daxi founded the studio out of his love for handmade leather goods, hoping that customers could experience the charm of handmade creations and the process of making leather goods. The entire studio contains 5-6 full-time employees and covers an area of approximately 360 square meters.

Highlights

o   The service Daxi offers include handmaking courses and personalized leather products

o   Daxi apply digital software to assist product design and handmake the final leather product

o   Social media including WeChat and Taobao live are used to promote their product and accumulate followers

o   Daxi cooperates with local shopping malls to hold pop-up events, developing a mutually beneficial relationship with the mall

Digital touchpoints

The digital devices used in the studio include iPads, mobile phones, computer, and camera. The studio uses different digital design software, including Auto CAD®, Adobe® Photoshop, Adobe® Illustrator on computers. A digital camera is used to take pictures of the leather product and record their making process. Before the leather product is handmade, there are several digital software involved in the whole process of work. The designer will draw the rough sketch on paper first, and then they will draw the detail of the product based on the sketch using Adobe® Photoshop. The next step has marked the dimension line and figures of the product in Adobe® Illustrator or Auto CAD®. After all of this process, designers will have a concrete reference to make the final product. Taobao Live, which is a Chinese e-commerce platform with live-streaming service, is one of the digital platforms Daxi uses to promote its product. One year ago, Daxi ran a show named Better Leather Product, Better Life on Taobao live, which received more than 550,000 views on the platform.
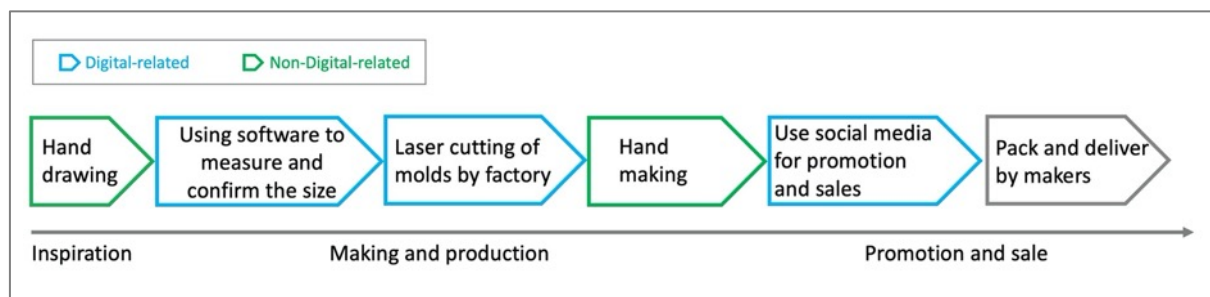

Figure 5.14 The digital platforms involved in Daxi Leather Studio's making and marketing

Brief introduction

Blue Wood is a woodworking experience studio in No. 66 Yinjiachong Creative Community, Changsha, and was named third place in the Changsha Maker Competition 2018. Zhou Li is the founder and designer of Blue Wood, and the whole team has four full-time employees from different art design majors such as graphic, architecture, and industrial design. The wood studio uses some digital equipment and software to assist the production of wood products. It mainly provides customers with handicraft courses and experiences, including woodworking experience, wood art exhibition sales, and combined courses with leather goods, weaving, and floral art.

Blue Wood regularly cooperates with Changsha Library and Hunan Library to carry out weekend offline activities. It also collaborates with local universities in Changsha to organize events to expand its popularity. Besides, Blue Wood is trying to promote its works through social media such as WeChat, TikTok, to attract handicraft lovers and develop long-term fans.

Highlights

o   Offering wood products and making courses for customer

o   Using table saw and laser cutting machine to improve their efficiency

o   Promoting products through social media including WeChat and TikTok

o   Having WeChat group chats including more than 800 followers

Digital touchpoints

The digital software currently used by Blue Wood includes AutoCAD®, Sketch-up, and Adobe® Photoshop. The staff will draw a sketch on AutoCAD® first and then transfer the CAD file into the laser cutting machine for cutting. Adobe® Photoshop is mainly used to process some photos and pictures. For wood making, the Blue Wood has table saws, laser cutting machines, CNC machines etc. For promotion, the Blue Wood opened accounts on major social media including WeChat, TikTok. Those social media platforms are key for them to communicate with customers. Blue Woods will also promote its events through other media channels. Because the studio will regularly organize events with the library in Changsha, it can indirectly publicize its studio through Changsha library's website and WeChat subscription. Another media platform Blue Wood has engaged with is TikTok, which is a short-video sharing platform. The Operator of the account will share the works and daily life of Blue Wood for people interested in woodworks. Also, they make tutorials videos for students to learn.
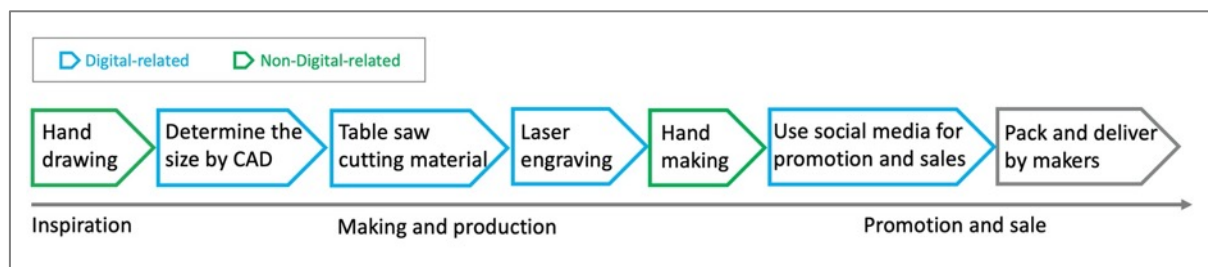

Figure 5.15 The digital platforms involved in Blue Wood 's making and marketing

Brief introduction:

The Hunan Embroidery New Media Live Challenge competition has been running since June 2019. It recruits outstanding young college students with innovative spirit and knowledge of the traditional culture. Under the guidance of the inheritor of Hunan Embroidery, the competitors participate in the practice of embroidery skills, and use innovative methods such as the live broadcast of new media to promote Hunan Embroidery culture and innovative products. The Hunan Embroidery Competition aims to allow more young people to contact and understand the charm of 'new domestic products' of Xiang Embroidery, devote themselves to intangible cultural heritage innovation, inherit the spirit of Xiang Embroidery, and further promote the innovative development of Hunan Embroidery.

Highlights

o   Uses social media: WeChat and TikTok to promote the embroidery competition

o   Combines traditional embroidery with new marketing methods of live streaming

o   Social media plays an important role in promoting competition and attracting followers

o   Mobile phones are used to record inspiration and facilitate living streaming

Digital touchpoints

In order to promote and disseminate traditional arts better, the Hunan embroidery competition adopts a new form of live streaming on mobile phones. Each player will use the Dongjia (an e-commerce application) to broadcast live embroidery creative cultural products to the audience. Participants will also use mobile phones to take pictures for assisting in the creative process in the early stages of creation.

After the creation of Hunan Embroidery works, the competition instructor will guide the competitors in media marketing, live broadcast interaction and other skills. During the competition, all participants participating in the embroidery training can choose a product and promote your own embroidery products by live streaming.

On the WeChat public account platform, the Hunan Embroidery Research Institute also make many public reports on the competition. The messages cover the entire competition process, including the competition preview, competition progress, competition work exhibition, etc. Social media software is an important publicity channel that runs through the entire competition process, adding a lot of attention to competition activities.
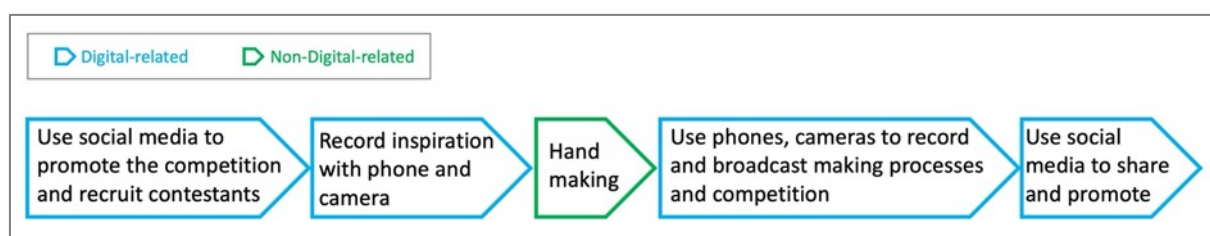

Figure 5.16 The digital platforms involved in competition

Brief introduction

In 2016, Kun Peng and his wife Huang Xiayin, who are also fashion designers, left the metropolis and returned to their hometown of Longtan Town, Xupu County, Huaihua City. There the Tatara Huayao Cultural and Creative Studio was set up, dedicated to tapping local folklore including local legends of Xupu Longtan and Taoist culture, developing cultural and creative products, and promoting a calm way of life. It is a studio that promotes traditional culture, designs products, produces products, and sells products. Focusing on the design and development of Huayao ethnic style products, the company focused on research and design and improvement, and developed a series of creative products for tourism culture. They launched Huayao style bags, Huayao style clothing, Huayao style shoes, Huayao style handicrafts and other special products. There are two designers and ten production workers. The studio's physical store is located in Xinxing Street, Longtan Town, Xupu County, Huaihua City, Hunan Province.

Highlights

o   Whilst inheriting traditional culture, design works meet contemporary trends

o   Internet plus sales model – in addition to online sales it addresses the urgent need for the inheritance of Huayao cross-stitch skills, drives and enriches the development of local tourism culture, and solves labour and employment in local Yao areas

o   The process of pattern design is by hand, but digital equipment such as graphic tablet and iPad are used to assist drawing patterns and illustration

Digital touchpoints

As shown in Figure 5.17, in Tatala, the pattern design process is mainly manual but with the support of graphic tablet or iPad. For advertising, packaging and other aspects of derivative products, some 2D software is used, such as Adobe® photoshop, Adobe® Illustrator etc. Digital technologies such as high-definition printing and thermal transfer are used when designing derivative products later. Normally, the studio promotes its products with WeChat, Taobao store and TikTok.
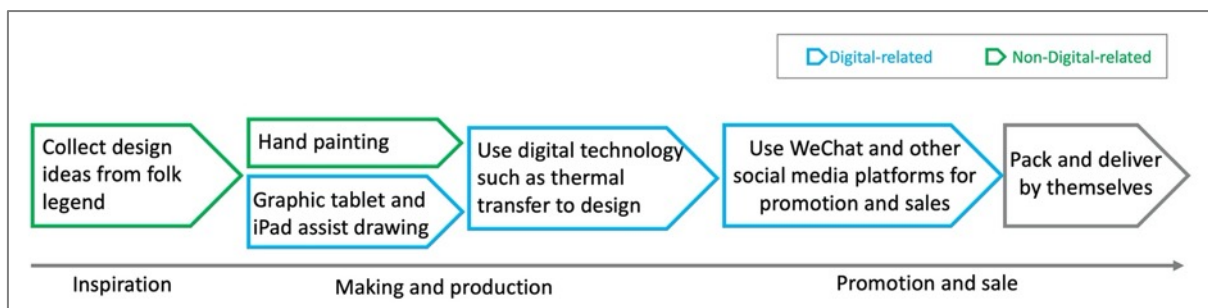

Figure 5.17 The digital platforms used by Tatala

Brief introduction

Xin Guo is the director of jewellery studio of Academy of fine arts of Shanghai University. There are two types of works designed and produced in the jewellery studio: (1) artistic works which are completely handmade emphasizing the combination of hands and materials; (2) commercial products which involve design using design software, and then sending accurate design drawings, process drawings and dimension drawings to a factory in Shenzhen for mass production with the help of machines.

Highlights

o   The studio produces both individual handmade artworks and machine-made mass production of commercial products

o   There is a need to distinguish between the two kinds of products in online platforms to differentiate their value and heritage

o   The challenges faced by the digital platform are: i) plagiarism; ii) designers and artists are not good at promotion, and have no time and energy to make as well as sell

o   Opportunities for digital platforms include raising international awareness of the most cutting-edge development of China's contemporary handicrafts

o   Need to find ways to develop services such as digital device sharing to improve usage - the studio owns 3D printers, but the material is too expensive, so it is not often used

Digital touchpoints

In the process of undergraduate teaching, the studio emphasizes the parallel study of handicraft and computer design. During the Convid-19 pandemic, the studio used WeChat and Tencent Conference for online teaching. The website of the Shanghai Public Art Collaborative Innovation Centre (PACC) includes art education, intangible cultural heritage inheritance, exhibition activities and news, including the jewellery studio.
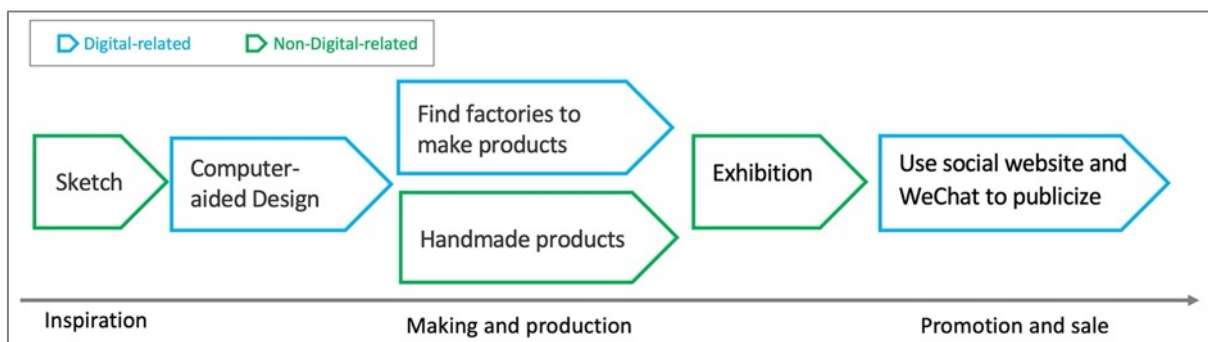

Figure 5.18 The digital platforms involved in Xin Guo's making and marketing

Chapter 6
Findings

Current uses, practices, challenges, trends and opportunities for using digital platforms in craft are summarised here based on the data collected from the desk research, online survey, workshops, interviews, focus groups, and researcher immersions. This is followed by a discussion of the challenges, trends, and opportunities of using digital platforms in craft.

Digital platforms have generated considerable value for craft in both countries, bringing innovation opportunities to craft, attracting more audiences, facilitating better interaction with customers, increasing sales, promoting networking, reducing the cost of marketing, and improving the efficiency of trade. Digital platforms have also supported the conservation of traditional Chinese craft, and in the UK digital platforms have supported collaboration between craft and other sectors. For example, Oluwaseyi Sosanya's development of 3D weaving which can be applied in other sectors including health, architecture, aerospace and clothing. In China, digital platforms create opportunities to collaborate with the third party and to promote craft business, e.g., receive craft gift by using points of ICBC (a bank) from its e-commerce shopping platforms (工商银行，积分兑换).

The UK and China have in common many aspects of using of digital platforms for craft: learning skills, assisting production, facilitating communication, creating new business opportunities and new business models, promoting online sale events and offering multiple channels for payments. Differences in the role of digital platforms for craft in the UK and China are noted throughout the findings in this chapter.

6.1 Current uses of digital platforms in craft

Highlights

o   Social media: Instagram is very popular for craftmakers in the UK, while makers in China tend to use WeChat

o   Live streaming such as Kuaishou and TikTok, an emerging digital platform, has become a popular way to engage a broad range of audiences with craft in China

o   Compared to China, UK makers are more likely to have personal websites, which are one of the main channels for them to promote their craft business.

o   Emails, newsletters, podcast and radio are widely used in the UK and rarely used in China.

o   E-education is more widely embraced by makers in China in comparison to the UK

o   Digital platforms such as e-Museum have been used to promote and conserve traditional craft in China

o   Digital platforms not only offer makers an opportunity to learn skills such as craft skills and digital skills, but also assist in the production in terms of accessing digital technology

o   Digital platforms such as social media help makers keep in touch with their customers, create business opportunities and new business model (B2B)

o   Online payment applications provide makers in China with a convenient way to get payment/ make it much more convenient for makers to get payment

o   Online sale events have the potential to stimulate craft sales in the UK and China

Digital platforms from social media, online marketplaces, e-Education, and digital software, to digital making tools and devices are used for craft in the UK and China (see Appendix Six for full details). Of these, social media plays a vital role in promoting craft activities: Instagram is very popular for craftmakers in the UK, while makers in China mostly to use WeChat. UK craftspeople prefer to use Instagram because they mostly post photos as opposed to text and this application is very convenient for photo and video sharing. WeChat is embraced by Chinese craftmakers as it has combined chat, social media, and mini-programs for selling, and has a huge userbase in

China. For example, Figure 6.1 illustrates the personal WeChat account of Tatala's founder, Tatala Huayao cultural centre's WeChat official account, and Weidian store which is advertised through WeChat homepage, illustrating the breadth of social media touchpoints in China.

Figure 6.1 the personal WeChat of Tatala's founder, Tatala Huayao cultural centre's official account, and Weidian Store of Tatala

Online marketplaces are used by makers in both countries: Esty is a well-known craft marketplace in the UK (see section 3.4.3 for details), while Dong Jia(东家) illustrated in Figure 6.2 is a famous e-commence platform for craft in China.
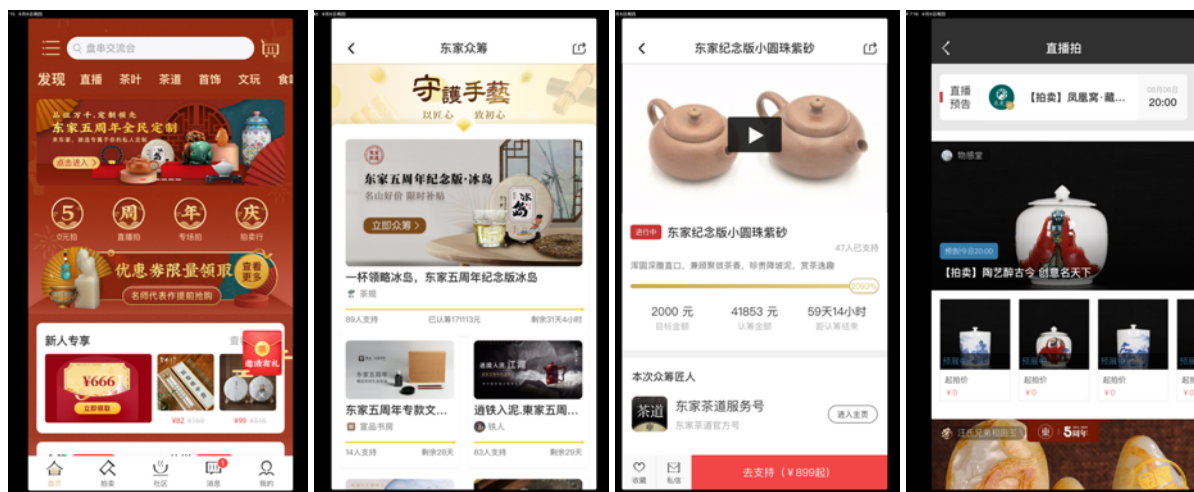
Figure 6.2 The home page of Dongjia Application（Bottom of page 44）and DongJia which combine sale, crowdfunding, live streaming and auction（top of the page 45）

Also, the mobile phone apps WeChat pay and Alipay make direct payment to Chinese makers very easy. In the UK, some makers use physical credit card readers such as sumup to receive payments from customers (Figure 6.3).
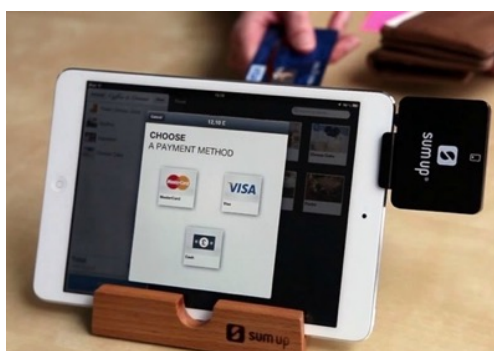

Figure 6.3 A card reader sumup used in the UK

In China, people can learn craft from specialised online craft course platforms such as the online university of Chinese craft（中国手工艺网络大学）and Shouyihuo.com（手艺活）, as well as Ai kecheng（爱课程网）, an education sharing platform supported by Ministry of Education and Finance, which including video-based craft courses. In the UK, people can find craft courses on Youtube and some step-by-step craft tutorials on website pages, but there are fewer online courses for people to learn craft skills in the UK compared to China.

Little difference was found between the UK and China in terms of using digital design software. Most digital software used in craft originates from design practices such as Adobe® Photoshop, AutoCAD®, and Adobe® Illustrator. In the UK, weavers used niche digital software, Weavepoint, to connect to computer-aided looms, which was not mentioned by participants in China. This also links with the phenomena that craftmakers in the UK have more access to specialised digital making tools such as computer-aided looms and Electronic Kilns in comparison to China.

Live streaming such as Kuaishou(快手) and TikTok(抖音短视频), an emerging digital platform, have become popular ways for makers to engage wide audiences in China. While in the UK, makers tend to use personal websites, emails and newsletters. Traditional media Podcast and radio are still some UK makers' choices to promote craft and to relax during their making. Digital platforms such as e-Museum (Figure 6.4) have been used for the conservation and promotion of craft in China, which is rarely done in the UK.

Figure 6.4 Online exhibition using VR from Hangzhou craft and art museum

Digital platform usage in rural and urban areas was found to be broadly similar though there were differences in access in the UK. In China, mobile internet, especially mobile phones, has dramatically increased rural makers' use of social media such as WeChat and TikTok to promote their craft and make sales much as urban craftmakers do. However, makers in the rural UK may not be able to access the Internet, limiting their access to customers and markets. Figure 6.5 illustrates how makers from rural areas of China use TikTok to show their making process and use WeChat to share their making stories and heritage. In terms of physical access, it was found that in the UK the size of digital production equipment (e.g., electric kilns) may be larger in rural and suburban studios (Figure 6.6) than urban studios.

Figure 6.5 TikTok was used by craftwomen in HuaYao to sharing making process during Festival and WeChat was used by intangible cultural heritage inheritor Tangmei Feng to share their creating stories

45

Figure 6.6 Electronic kiln used by makers in urban areas (left) vs used in the suburb (right)

6.2 Challenges for using digital platforms in craft

Highlights

o   Craftmakers are often not equipped with relevant digital skills in production, social media, and online marketplaces

o   Multiple social media channels make it difficult for makers to manage in terms of time and skills

o   Inability to access to the Internet in some rural areas of the UK prevent makers from getting in touch with customers and collaborators easily

o   No face-to-face connection with humans and lack of physically handling the craft remain the barriers for promoting digital platforms in craft

o   It is challenging for makers to reach the right audiences in social media and online marketplaces in both countries

o   It can be expensive to promote craft on some online marketplaces

o   Makers have IP protection concerns and even patented craft work in China may be easily copied online

o   People's perception about craft also affect makers: i) in the UK, craft should be handmade, and it does not look completely perfect; ii) Customers' decision is likely to be affected by the price in China

There are various challenges for makers in both the UK and China to use digital platforms for their craft activities. A frequent challenge mentioned in the research is that a lot of makers do not think they are equipped with relevant digital skills in production, social media and online marketplaces. For example, participants from the UK mentioned the 'Help' menu of digital software is not always helpful and they do not know how to make the best use of digital tools to produce craft. In China, makers think that they lack a professional level of knowledge about online promotion and sales, especially for those makers in the rural areas even though they may be able to use TikTok and WeChat. Also, it is a challenge for Chinese makers to build their own fan pool meaning that they find it hard to gather their fans together without depending a third party platform.

Another major challenge is **access**. Makers from both countries shared many issues relating to access. For example, there are too many social media channels for makers to learn, manage and update. Makers found that some stipulations and rules of online marketplaces were difficult to meet, and some online marketplaces were overly restrictive being only open for particular types of craft. Makers also often have to pay for permission to be featured on social media and online

marketplaces. The UK and Chinese makers were found to have specific access challenges. For example, there is no internet connection in some rural areas of the UK, and online payment is often not easy to set up and operate. In China, some participants stated that it is quite challenging for them to connect with some craft accessories' manufacturers during the process of production and development. Makers in China that some handicrafts which deal with large-sized objects, or sophisticated technology, or for which it is difficult to obtain raw materials are not convenient for teaching online, such as bamboo weaving and ceramics.

There are also challenges linked with **engagement** in the UK and China. Makers experience pressure to update social media channles and online marketplaces to attract customers, even though social media cannot reach all kinds of customers. UK participants noted that it is challenging to engage audiences on multi-platforms at the same time and it is difficult to monitor the impact of all this social media effort. Chinese makers highlighted that it is a challenge to collaborate with designers who are provided by third parties, for example to create large production runs of craft items, because they may have different perceptions about craft and the value of traditional materials and techniques.

An issue connected to the engagement challenge is the **physicality of craft** – digital platforms can only offer non-tactile access to craft online. In the UK, social perception is that craft should be handmade, and it does not necessarily look completely perfect, but it is difficult to convey the handmade nature of craft online. In China, customers compare products mainly by price – decisions are often by price instead of quality or product detail. Where the craft cannot be seen and touched in person it is difficult to convey the quality and value of the piece. As one maker said, 'it is difficult to sell the price over 1000RMB craft online' as customers cannot see and touch the piece in person. Also, customers may not be able to differentiate between similar products online where they cannot feel the quality of the piece.

Intellectual property (IP) is a concern amongst makers in both the UK and China. For example, in the UK, Hand & Lock never post designs online in order to prevent people from duplicating them. Tatty Devine from the UK hires a specialist lawyer to deal with IP related issues. Similarly, embroidery maker from Xiang Emboridery of China has applied for patents to protection her creations. However, in China, most craft patents are appearance patents, which are easier to copy online compared with technology-based patents. Therefore, makers find that they have to produce creative work rapidly in order to attract customers and win the market before cheaper copies of their designs appear. This is despite online marketplaces such as Alibaba in China having an IP policy and algorithm that could find plagiarised craft products and punish vendors of plagiarised craft.

Last but not least, there are also challenges due to people's **lifestyle** and perception of digital technologies. For example, people who are digital native are more likely to familiar with digital platforms compared with older generations who are not born in the digital era. Makers have to make a balance among the cost of platforms, making exploration, and income. For some makers it is a lifestyle choice to prioritise making and exploration over the investment of time and resources in digital platforms. In addition, some makers just do not like digital things and prefer to pursue tradition and nature, which is often what led them to craft in the first place. A more detailed summary of challenges can be found in Table 14.6 of Appendix 6.

6.3 Trends

Highlights

o Digital technologies make it easier for craftsmen provide customers with modifiable services and co-design with their clients

o Universities in the UK have started to open transdisciplinary craft-related courses to teach makers knowledge about engineering and materials

o E-learning of craft skills are gradually being embraced in the UK

o Live streaming has become a popular way for makers in China to promote their craft

o Chinese makers combine traditional craft elements in daily products, e.g. embroidery in loudspeakers, which may promote craft in modern times

Digital software and social media have greatly facilitated customised design and co-design with customers in both countries. For example, at Hand & Lock (Figure 6.7), when customers want a specific design, their designers will mock-up a design using digital software such as Adobe® Illustrator. The digital files can be sent to customers by emails to allow them to review the design before production. These designs are then used in both hand and machine embroidery production. This digitalisation can also reduce errors when customers order many pieces and require them to be the same.

Figure 6.7 Customised embroidery by Hand & Lock from the UK

Similarly, in China, Xiang embroidery uses 3D digital software to design craft products that combine traditional crafts with modern daily products (Figure 6.8). For example, the embroidery is used to decorate lamps, and the embroidery pattern looks very beautiful when the light is on.

Figure 6.8 Craft products by Xiang Embroidery from China

In the UK, universities have started to open transdisciplinary craft-related courses to teach makers knowledge about engineering and materials. For example, the textiles research course from the Royal College of Art (UK) provides students with an opportunity to work with material scientists, manufacturers, healthcare specialists, architects, and engineers with a global reach. Their students can explore and question the fluid hybridity of the textiles' discipline through design, craft, and artistic practice.
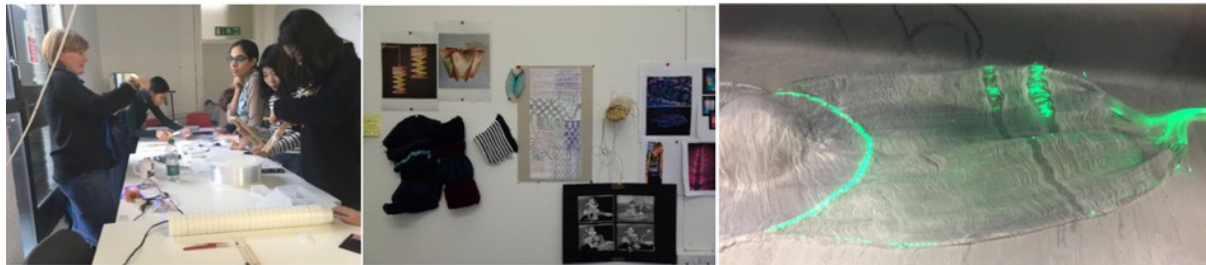

Figure 6.9 Research on CraftTech: hybrid frameworks for textile-based practice by RCA (Tan, J et.al., 2018)

As Figure 6.10 shows, Chinese craftspeople use live streaming platforms such as TikTok and TaobaoLive to share their craft stories, teach craft skills, and present their final work. In this way, audiences are more likely to know about their craft and buy their products. In China, the live streaming and short video platform TikTok has become the largest platform for promoting cultural heritage and announced an 'Intangible cultural heritage partner' scheme in 2019, which has drawn substantial public attention and created great business opportunities for makers (Xinhua net, 2019), but there are few similar uses of live streaming outside China (Lu et al., 2019).
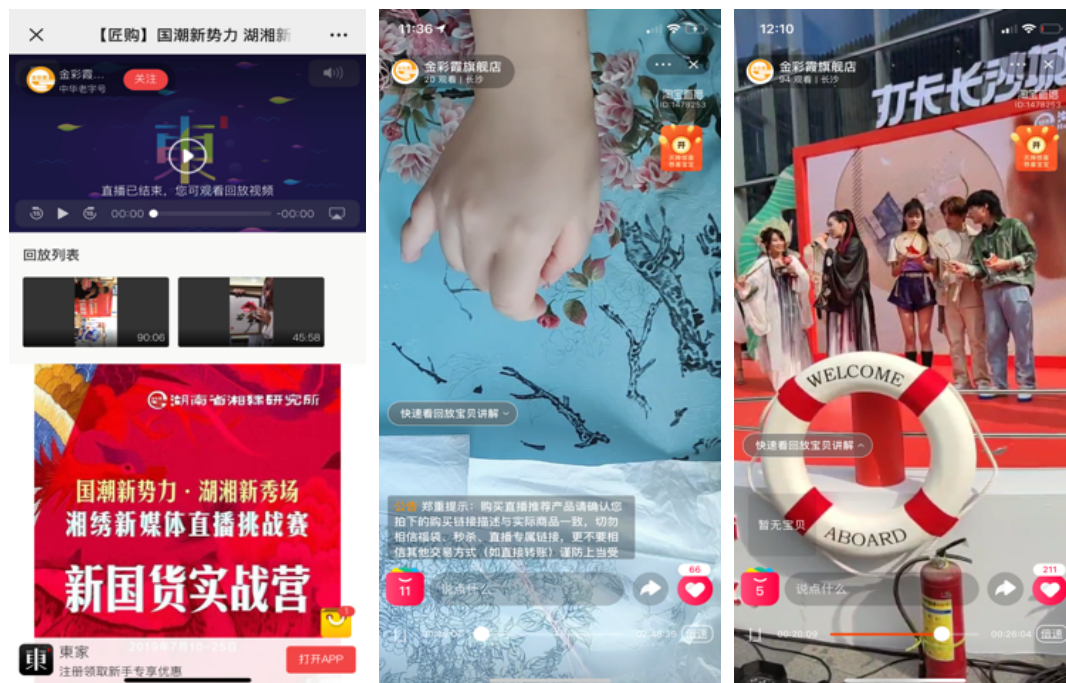

Figure 6.10 Xiang Embrodiery Research Institue uses TikTok live streaming to advertise Hunan embroidery New Media Live Challenge, live show about embroidery on Taobao and collaborate with Chinese Reality show'Sisters Who Makes Waves'

In China, makers have combined traditional craft elements in daily products and tried to reach wider customers. For example, one of the China workshop participants used embroidery in personal loudspeaker decoration, which may be a way to promote craft in modern times (Figure 6.11).

Figure 6.11 Embroidered louderspeaker by Yifei Embroidery from China

6.4 Opportunities

Highlights

o   Digital production equipment has the potential to facilitate making and provide cheaper craft (half-handmade) in both the UK and China

o   Digital platforms provide craftmakers with new opportunities in terms of reaching customers and collaboration

o   Social media could reduce the cost of promoting craft business in both countries

o   Outsourcing has become popular and can be facilitated by digital platforms

o   Online crowd funding has been used to pre-fund craft projects in China

Digital production equipment could greatly facilitate making in both countries (Figure 6.12). For example, all the pieces of Tatty Devine's jewellery (UK) are cut by laser cutters. Laser cutting technology has been used in making acrylic jewellery since the founders Harriet and Rosie discovered laser cut acrylic when they visited New York in 2001. 'The detail we can achieve with a laser cutter is so much higher that what we would achieve by like sawing it by hand. I think it's a very good medium to use - it's fast, it's relatively low waste, and you can use lots of different colours and patterns and stuff', said by Tatty Devine's design assistant, Hollie Melding. Blue Wood from China has used table saws, laser cutting machines, and CNC machines in the making process. For example, the SAWSTOP PCS52 table saw was imported from America, which is famous for its professional and precision. This allows for faster production of craft objects whilst retaining tradition style and aesthetic.

Figure 6.12 Laser cut acrylic of Tatty Devine (UK) and table saws of the Blue Wood (China)

Also, digital production could offer customers less expensive craft in both countries. For example, the machine embroidered varsity letters from Hand & Lock (UK) are just £5. In this way, digital embroidery makes it possible for people with a limited budget to buy embroidery and thus expand the Hand & Lock's business. In China, digital manufacturing technologies such as 3D printing have also been widely used in craft practice. In jewellery design, digital software (such as JewlCAD, Rhino, Maya, 3DMAX, Grasshopper, etc.) allows designers to express their creative ideas easily and freely, which not only enriches the artistic form of jewellery, but also effectively saves time and cost. The application of digital software makes the high quantity production of jewellery and personalised customer service possible. Some companies, universities, and research institutes have also explored the combination of 3D printing with traditional jewellery techniques. As shown in Figure 6.13 (right), Dr Hao Liang, from the Jewellery Inheritance and Innovation Development Research Centre of China University of Geosciences, improved a 3D chocolate desktop printer and used 3D printing jet technology and silver paste materials to print metal directly. They also explored the combined effect of 3D printing, digital modelling technology and traditional techniques including silver tire cloisonné enamel, filigree, hairpin engraving, gold and silver inlay, and gold inlaid jade based on experiments (Meng and Liang, 2017).

Figure 6.13 Digital embroidery letters and enamel works of silver padding buttefly made by 3D printing (Rong hong, et al., 2015)

Digital platforms also provide craftmakers with new opportunities in terms of reaching customers and collaboration. Social media, especially Instagram and Facebook, have been become an indispensable part of Tatty Devine's marketing platform (Figure 6.14). Instagram is perfect for them to communicate with customers as it is visual, focussing on pictures, and Facebook is convenient for Tatty Devine translating into sales as it enables customers to click right through to purchase items. In China, a very interesting case is the Hunan embroidery new media live challenge competition, introduced previously, which uses social media and live streaming to promote craft skills through competition.
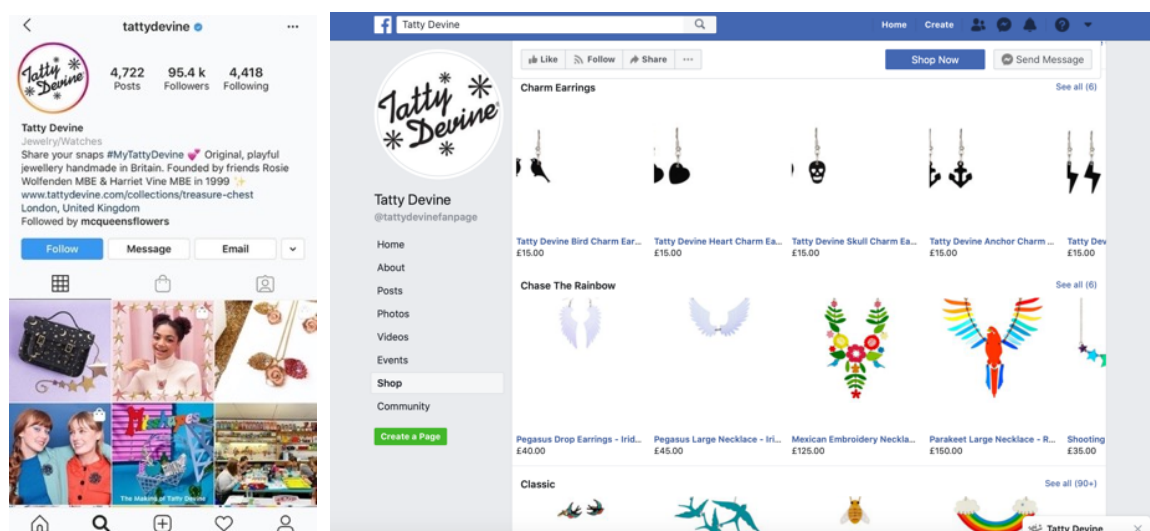
Figure 6.14 Tatty Devine's Instagram screenshot and Facebook shop page

Outsourcing has become more popular with the development of digital technology. In the UK, ceramist Jeremy Nichols uses outsourcing to 3D design and 3D print the moulds for teapot handles, which can make more accurate moulds and allows for quicker to modification (Figure 6.15). In China, there are some parts of craft products of Xiang embroidery which have also used outsourced production. In the future, increased outsourcing and close collaboration with other makers will empower makers to save cost and create innovative craft products.
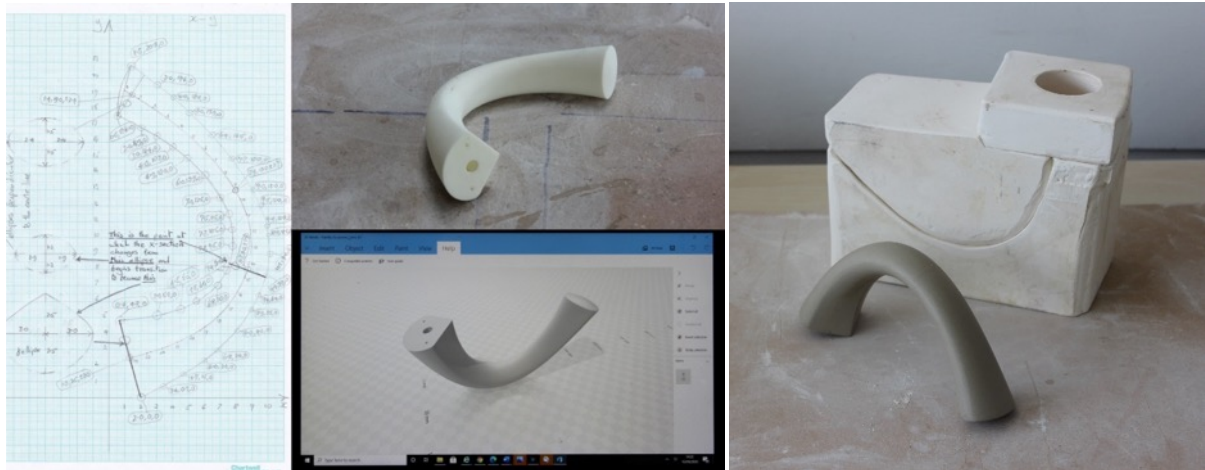

Figure 6.15 3D printed handle model and its plane graph

The widespread use of digital production also allows makers to offer more products and designs for customers in China. For example, with the help of graphic design software and 3D modelling software, there is an increase in the number of new products that Xiang embroidery designed every year. Customers can buy these new craft products which range from a jewellery box, lamp and even bow tie in Xiang Embroidery studio (Figure 6.16).

Figure 6.16 Embroidery products from Xiang Embroidery

Online crowdfunding has been used to pre-fund craft projects in China thereby reducing financial risk to makers. Makers share their ideas with potential customers and use the number of presales to estimate the required size of production. For example, Songmont (崧), an independent bag and clothes brand with over 40 years experience in tailoring, now make all their clothes and bags available as presales on WeChat groups. Furthermore, the design and making team discuss with customers in the design and making technique to encourage future purchase. In this way, craft skills are shared, cultural heritage is communicated to customers, and financial risk to makers of purchasing large amounts of material is reduced.

Chapter 7

Recommendations for Craft and Digital

Recommendations for how digital platforms could be better used for craft in the UK and China are presented here based on the findings about the uses, challenges, trends and opportunities of digital platforms for craft. These recommendations were developed in a three-day data analysis and synthesis workshop in China involving all project researchers. Framework analysis (Smith and Firth, 2011), which enables themes to be developed both inductively from the experiences and views of participants and deductively from the literature review, was used to structure the data analysis. Figure 7.1 lists all the themes identified in the collected data and the arrowed lines highlight those themes which inform recommendations for digital platforms for craft.
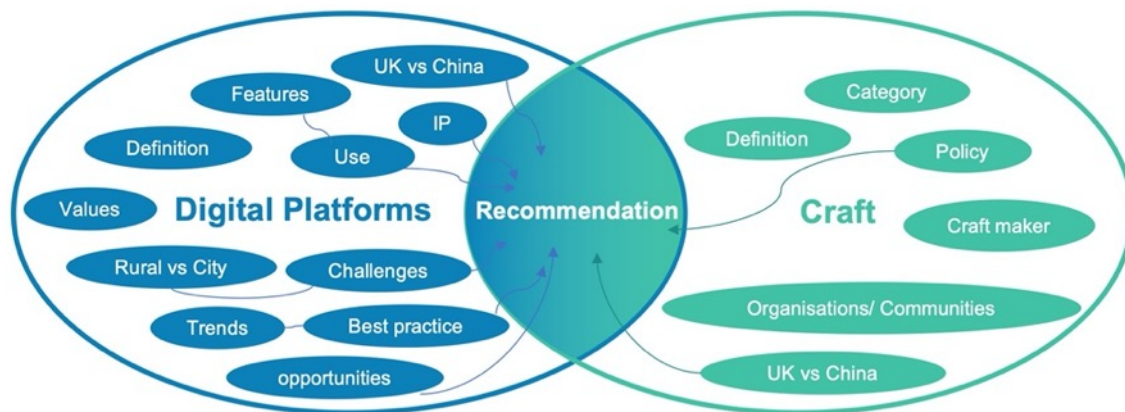

Figure 7.1 Themes of data analysis

Six categories of recommendation are proposed as shown in Figure 7.2, which illustrate how these recommendations touch on a craft maker's journey from inspiration for making and then sales.
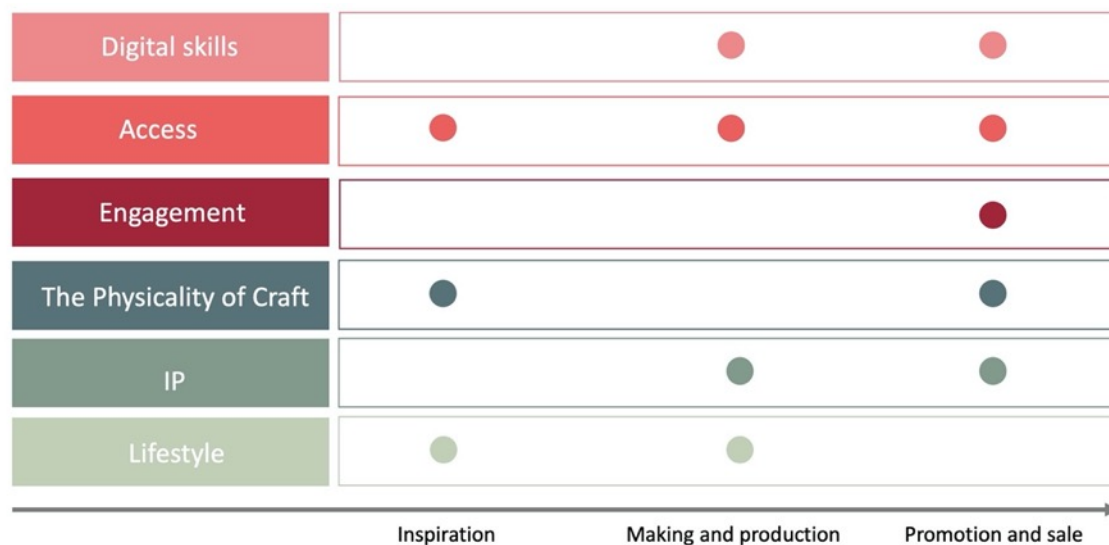

Figure 7.2 Recommendations along the craftmakers' journey

Recommednation: Digital Skills

Increased provision of digital skills training and awareness is needed to help craftmakers make the best use of production tools, social media, and online marketplaces for their craft in the UK and China. There is also a need to undertake an in-depth analysis of the skills needed for contemporary craft. Besides making skills, makers nowadays need the ability to use digital

platforms including digital technologies, digital software, social media and online marketplaces in making and promotion (Figure 7.3).

Greater support for the outsourcing of digital aspects such as social media management would help to reduce the additional time burden of using digital platforms and allow makers to better focus on their making.

Governments and craft organisations could help to equip makers with these kinds of digital skills through a series of training planning and provision, and support policy development.
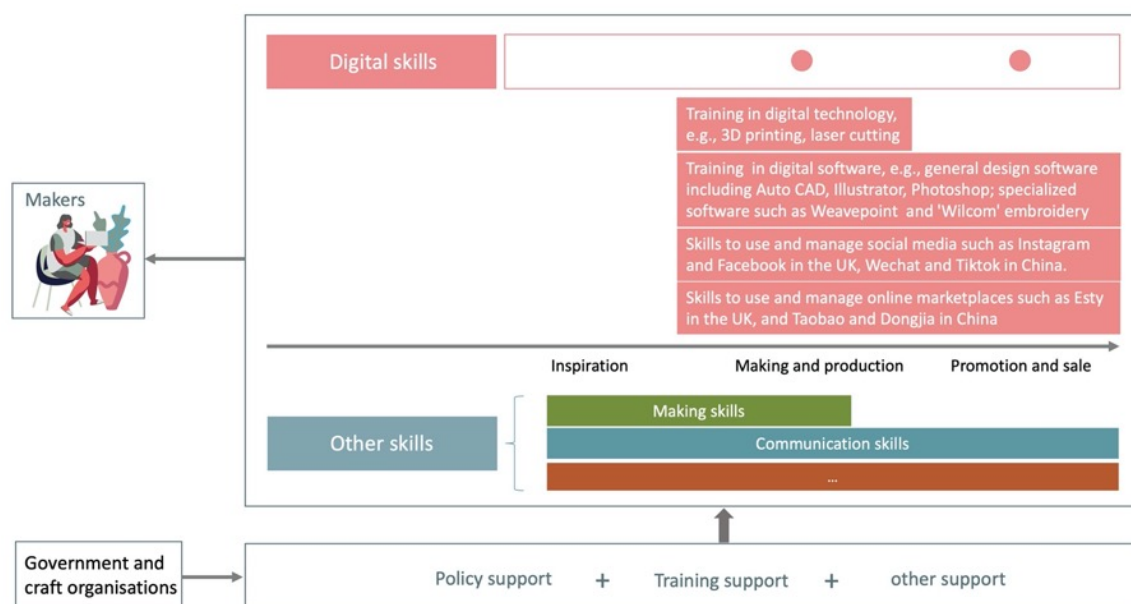

Figure 7.3 Recommendations to address the challenge about digital skills

Recommendation: Access

Greater access to high-speed internet, especially in the UK, and high-quality digital production tools such as 3D printers especially in China should be made available through government infrastructure and maker spaces. For example, the UK has many craft hubs and maker spaces which are equipped with digital equipment such as 3D printers and laser cutters, more importantly, those hubs and spaces are publicly available for makers to access. In China, those facilities either in private studio or university, which may not easy for most makers to access.

Community-based, not-for-profit, and guild based online marketplaces should be encouraged in order to reduce barriers access to online marketplaces and open new customer bases. These platforms could also offer routes to crowd-funding, which would help to reduce the financial risk of innovation.

Also, it is essential to minimise the unnecessary rules and regulations of online marketplaces and social media to encourage makers to use them to promote and sall their craft.

Makers could also use online tools increase their access to social media, for example, to manage multiple social media accounts. It should be noted access is associated with makers' level of digital skills, which means accessibility could be improved once makers become more confident in using digital platforms.
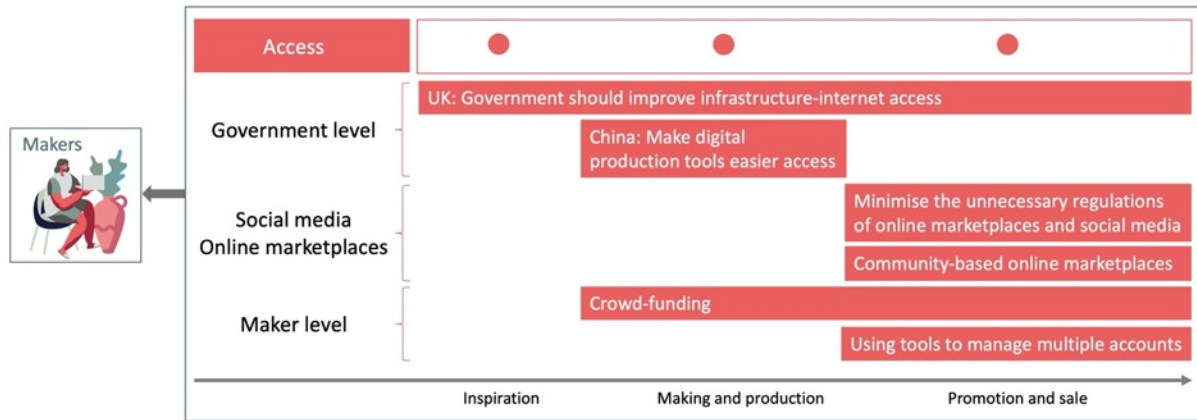
Figure 7.4 Recommendations to address the challenge about access

Recommendation: Engagement

Online engagement requires frequent interaction with customers, which would be time-consuming for most makers. However, as seen in China, increased use of live streaming could help craftmakers to connect with wider audiences for craft, build networks of trust, increase customer base, and reduce the reliance on in-person communication. Live streaming in this way brings a more personal and conversational form of engagement between makers and customers in China as compared to websites and social media such as Instagram more typically used in the UK. For example, in China, craft audiences can witness the making process and interact with live streaming makers in real-time. Moreover, the Chinese use of micro-videos to promote craftmakers and their live streams might have a similar positive impact if used in the UK.

Combining offline and online activity is also beneficial for engaging with customers. In the UK there are regular craft exhibitions such as London craft week and Made in London which allow individual makers to present their craft work and attract potential customers who may buy their craft online in the future. UK exhibitions also typically combine a series activities such as talks and training workshops to promote the interaction between makers and customers. In China exibitions are typically much larger and focused purely on commercial aspects of craft. Chinese exhibitions may benefit from being smaller scale to encourage more direct customer-maker engagement, and including activites such as training workshop.
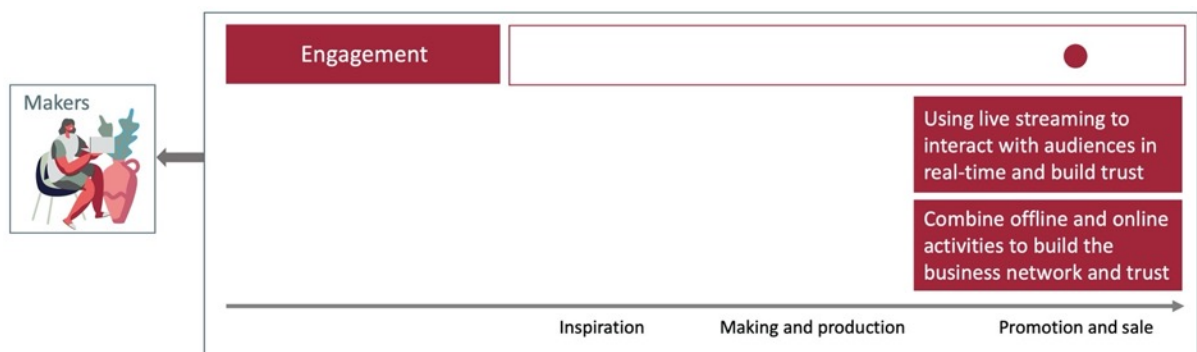

Figure 7.5 Recommendations to address the challenge about engagement

Recommendation: The Physicality of Craft

Craft produces physical objects which are impossible to touch online. As with engagement, it would also be useful to combine offline and online activities to build the business network and

more importantly, increase customers' trust. In this way, customers are more likely to buy craft online and with less concern about the lack of physically handling of the craft.

Online marketplaces may need to provide supportive technology with makers in order to help customers better choose products and understand their physical nature. For example, Augmented reality (AR) might offer ways to better convey the physicality of craft objects when they can't be touched in person.

Hybrid craft may be a new trend in combining digital with physical making in craft. Universities and craft organisations could provide makers with more classes and tutorials in hybrid craft and digital craft, and more importantly, encourage makers to move this new approach out of the academic research world and into craft practice.
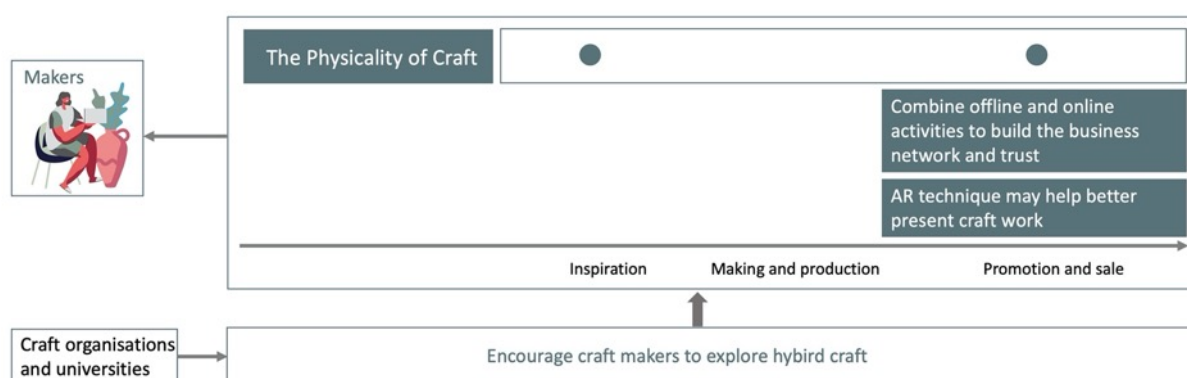

Figure 7.6 Recommendations to address the challenge about the Physicality of Craft

Recommendation: Intellectual Property (IP)

A craft maker's intellectual property is arguably one of their greatest assets. Greater awareness of IP protection for craft needs to be provided by online marketplaces and government initiatives. This would help sustain contemporary craft by increasing the value of craft and encouraging greater use of digital platforms to promote and sell craft. An excellent example by one of the UK case studies -Tatty Devine - their founder Harriet stamps her design when she finishes the drawing to make a dated record of the creation, and importantly, they have a lawyer to help monitor IP issues. A similar example in China is a young embroiderer from Xiang embroidery who applies for appearance patents to protect her designs. These examples illustrate that several craftmakers are attempting to protect their work. However, there are still many craftmakers who do not take such precautions and there is still a long journey to protect makers' IP in the long-term. This requires governments and craft organisations, online marketplaces and makers themselves to work together to improve IP protection of craft.

Furthermore, government initiatives need to protect cultural heritage where possible. For example, in China, the government carried out a series of policies to protect a range of cultural heritage including craft. In the UK, in contrast, the government and craft organisation are more likely to play a role in promoting contemporary craft and innovation practices rather than setting out to protect specific cultural heritage.
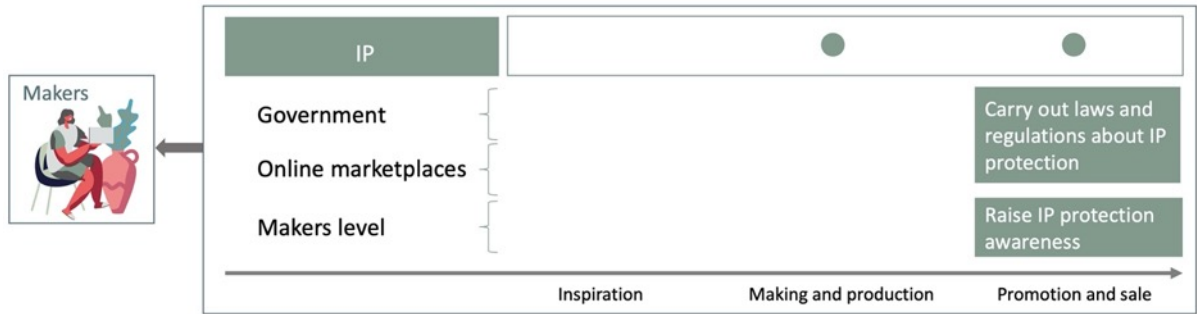
Figure 7.7 Recommendations to address the challenge about IP

Recommendation: Lifestyle

People's lifestyle and personal preference may affect their views of the application of digital platforms for craft. First of all, makers themselves may prefer to work with their hands rather than with computers and associated tools. We should respect makers who prefer the traditional ways of making and production. At the same time, government and craft organistions may need to help craftmakers understand the potential advantages that digital technologies and social media and online marketplaces could bring to their craft business. Makers need to learn how to make a balance between making, advertising on social media, and selling on online marketplaces.

Customers may also have various views regarding craft and digital platforms, and it takes time for people to change their perceptions. Makers may gradually extend their potential customers whilst recognising that digital platforms do have limitations in reaching customers, especially those who are primarily interested in traditional craft. Instead, makers may try to design and make crafts that target people born in the digital age if they would like to build their online marketplaces. For example, Xiang embroidery combines traditional embroidery with daily products and makes some smaller items for about £20, which are welcomed by younger customers and liked by the market.
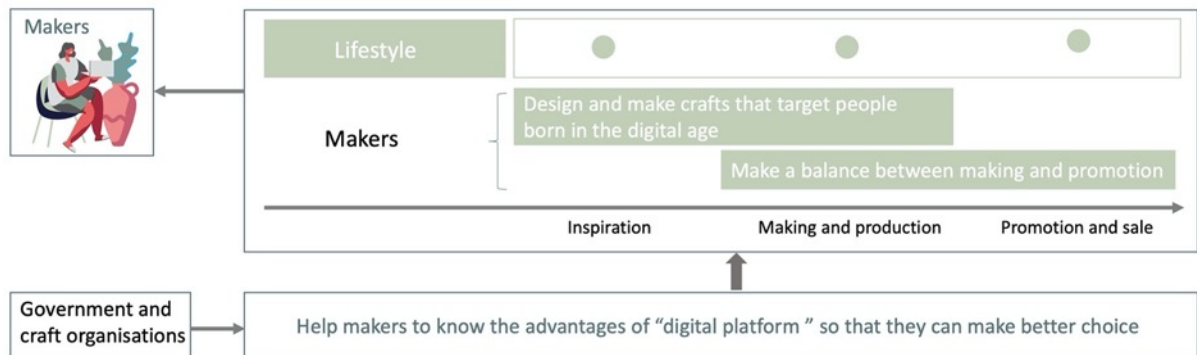

Figure 7.8 Recommendations to address the challenge about lifestyle

Chapter 8
Conclusion

This report presents the results of an investigation into what and how digital platforms are used in the craft sector in the UK and China. Even understanding the term 'digital platform' is problematic as there is currently no consensus on its meaning. For example, perception and translation of digital platforms (数字平台) in China may refer to an opportunity or a place for people to make progress in a particular area, or a type of computer system or the software. In this research, the focus is on any digital element that facilitates design, making, production and even sales in the craft sector. Therefore, digital platform is defined at a broad level, referring to all kinds of use of digital technologies in craft activities from social media (e.g. Instagram and WeChat) and online marketplaces (e.g. Esty and Taobao) through to digital production tools (e.g. 3D printers and digital software), materials, and even makerspaces. As a product of the current digital era, digital platforms provide new ways to make, design, and even sell in the craft sector. Digital platforms break the boundaries of time and space to allow craftspeople to learn and promote their craft even in the rural areas of China. It is worth noting that some digital platforms used for craft such as Adobe® Illustrator and 3D printing, were created primarily for the design industry, whereas others such social media and online shops, were not, but often do rely on some design skills to be successful.

Digital platforms have inevitably reshaped and refashioned craft sector in both the UK and China. On the one hand, digital technologies provide more possibilities and choices for craft making. For instance, instead of making a mould of teapot's handle by hand, which is unchangeable and time-consuming, digital software can easily modify a teapot's model and print it using a 3D printer which means that the mould of teapot's handle can be made much more quickly. In this way, digital making and production can replace some processes of making craft. On the other hand, many makers may have to sacrifice their previous making time to learn digital and design skills such as using digital software and managing social media accounts. Therefore, it is vital for policymakers and government to provide support for contemporary makers to efficiently learn the necessary digital skills. This report presents recommendations for aspects of digital platforms that could be further explored, for example, applying live streaming to promote craft skills in the UK, or how to provide makers better access to making and digital tools in China.

This report focussed on how skilled craftmakers use digital platforms. Future research should explore the role of digital platforms for DIY craftmakers and craft education.

Underlying all of these issues is that there is a need to ensure that traditional and pure hand-made craft retains its value in terms of cultural heritage in the digital era - the challenge is how to make better use of digital platforms to support and inherit craft in modern times.

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