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Making Links Together: Valuing People and Creativity

Maria Hanson Laura Cave Dr Ellya Zulaikha

Introduction

Craft makers (also referred to as craftspeople and artisans) within many Overseas Development Contexts (ODC) are often seen as inferior to 'designers', especially within those areas, where formal education and knowledge about how to design is limited or non-existent. In cultural contexts where rote methods of teaching are the norm, it is not surprising that artisans often rely on copying existing products rather than having the confidence and agency to embark on a creative journey that generates new ideas and products. Many craftspeople rely on orders from buyers who determine the design. The origins and "ownership" of these designs can be a contentious and complex issue, leading to debates about cultural appreciation vs cultural appropriation. As a consequence, if craft makers have no creative agency for whatever reason, and there is pressure to sell products in order to earn a living, many of them attempt to compete on price as the primary point of difference (Cave 2016).

In contrast to this, within countries with greater developed economies 'Design' is seen as a process which is inextricably linked to craft making. The term Designer/(Craft)maker is established and understood to mean someone who has the creative agency to generate ideas, innovate, make decisions and utilise craft skills in the realisation of end products. This ability to transition from an idea through product development, problem solving, and understanding of materials through hands on making is cited as key in the innovative cross-disciplinary work being done within the UK craft sector (KPMG LLP 2016). A recent Study by the UK Crafts Council revealed that the growth of consumption of crafted products in the UK has risen significantly in the last fourteen years. Consumers in England buying craft increased from 6.9 million in 2006 to 31.6 million in 2020 (Morris Hargreaves McIntyre 2020). A number of factors are believed to have influenced this rise including a desire for authenticity, for experiences, and for ethical and sustainable consumption.

This paper explores how the economic livelihoods of a defined group of craft producers in Indonesia can be improved through design focused activities that expand upon already established linkages and collaborations. Fieldwork uses Participatory Action Research (PAR) methods, (Swantz 2008) involving co-creative design thinking workshops that are situated within the terrain of Design Anthropology (Gunn 2012). Funded

through Research England's, 2018-19 Global Challenge Research Fund (Research England 2018), the case study project, Making Links 5, (2019) sought to empower craft makers by teaching design thinking through making in a shared studio/workshop environment. Underpinned by the principles of fair trade, the aim was to work within a specific context, where potential for the development of unique craft items for an international market, had been identified by members of the in-country project team.

Fieldwork was situated within Jombang, a rural area of East Java, with established artisanal skills in recycled glass bead making. Two thirds of the community work in this craft industry which has been in decline since 2000. Therefore, design innovation and new markets are pertinent to the long-term sustainability of the community (Zulaikha and Brereton 2011). The UK partners devised cumulative design activities, that engaged seventeen artisans in an intensive three-day co-creative workshop, resulting in four prototype collections of new jewellery products in glass and metal suitable for exhibiting and with export potential.

2. Context/Background

2.1 Overview:

The research discussed in this paper is set within the context of the United Nations (UN) 2030 sustainable development goals (SDG's), and specifically addresses goal 8, which 'Promotes inclusive economic growth, employment and decent work for all' (United Nations 2015). It responds to two of the twelve specific targets which (target 8.3) support entrepreneurship, creativity, and innovation in order to encourage the growth of micro, small and medium enterprises and (target 8.9) which promotes local culture and products. For this latter target to be effective in the craft-making industries, understanding the identity and cultural relevance of crafted products are fundamental in the design development of new products that will be meaningful to others. The UN SDG's are the drivers for many global initiatives being implemented around the world and underpin the work undertaken by organisations such as the Organisation for Economic Co-operation and Development (OECD) (2018) through the Development Assistance Committee's, (DAC) Official Development Assistance (ODA) list (OECD 2018).

When considering possible initiatives within such global agendas, it is important to understand the socio-economic landscape. The International Labour Organisations publication, 'Women and Men in the informal economy: A statistical picture', (ILO 2018) shows that 61.2 per cent of global employment is situated within the informal economy representing two billion of the world's employed population. When agriculture is removed from this statistic the figure in other informal sectors drops to 50.5 per cent. However, there are some regions where the informal economy is much greater; with Africa at 85.8 per cent and Asia and the Pacific at 68.2 per cent. The countries identified on the DAC, ODA list, link specifically to income per capita. In 2019 Indonesia, which falls within the lower middle income countries and territories on the ODA list is categorised as both emerging and developing, (OECD 2018) and is recorded to have 75 per cent employment in the informal sector.

After agriculture, defining other occupational groups is very complex but globally a significant proportion fall within one of the following four categories (WIEGO 2020);

- Domestic Workers
- Home-based workers
- Street Vendors
- Street Pickers

Home-based work was traditionally connected to old technology industries, which include garment making and crafts but now include new technologies such as assembling of micro-electronics. Home-based work represents a large share of employment in Asia and generally a greater share for women. There are many challenges with this particular category of informal economy which includes low incomes, irregular work, delayed payment and rejected goods. Within the craft industry this last issue can be the result of sub-standard quality which in itself can be attributed to a lack of agency, connected to workers not designing and selling the finished goods, and not knowing who their consumer is.

The level of socio-economic development positively correlates to formality within employment, with education being a key factor within this. When the level of education increases the percentage of informal employment decreases (WIEGO 2020). It is important to note that whilst those working in the informal sector do not have the same access to formal education, the apprenticeship style of learning by doing and copying others, ensures that skills and knowledge are accumulated and passed on. However, the more nuanced skills of creative thinking and entrepreneurship are less embedded and valued by this process.

2.2 GCRF – Global Challenge Research Fund

The Global Challenge Research Fund (GCRF) forms part of the UK's ODA Committee's agenda, to support research that addresses challenges faced by developing countries. It is administered by a number of delivery partners which includes the UK's Research Institutes. Research England (2018) in turn distributed sixty-eight million pounds of these funds in 2018-19 to English Higher Education Providers to undertake research in developing countries that fall within the ODA DAC list. Sheffield Hallam University (SHU) was one of the recipients of this fund and its mission to 'transform lives' through research and knowledge exchange has been able to increase research capacity in areas that generate social, economic and cultural benefits that align to platforms of thriving and inclusive communities and 'Future Economies'. Making Links 5: Craft Value Chain is one of the projects funded by the SHU, GCRF and will be discussed in detail in section 5 of this paper. It sits within the beacon of Empowering through Creative Practice which has at its heart co-creation as enquiry and creativity to promote empathy and understanding of the needs of marginalized communities.

2.3 Expanding networks – AHRC Project

The Making Links 5 research builds upon an earlier AHRC funded project, Creating, Connecting and Sustaining Links with the Indonesian Craft Economy, (Dearden 2018) which had already established initial craft networks in the UK, Java, and Bali. The primary aim was to develop linkages amongst Indonesian craft producers, design researchers in Indonesia and potential customers, and focused on enabling

organisations in the Indonesian fair-trade craft sector to uncover and communicate evidence of the social value being generated through knowledge sharing. This was achieved through UK/Indonesian exchanges and creative design and making networking activities held in Sheffield (UK), Surabaya (East Java) and Ubud (Bali). The visit to the UK by Zulaikha (Academic and Researcher from ITS) and Kadek (Co-ordinator and translator for the Tungjung Women's Creative Project) coincided with the 2017 Spring Fair in Birmingham, providing the opportunity to see first-hand how crafted products from Indonesia were being marketed and sold within an international context.
Other activities involved visiting and meeting UK craftspeople, workshops, maker groups and fair-trade retail stores. The visit culminated in a creative making symposium hosted at Sheffield Hallam University, which involved the methodology of 'making as enquiry' (Bowen 2013) allowing participants to use the act of making as a catalyst to share ideas and knowledge and explore co-design through collective making. It was this symposium that enabled the core team of Making Links 5 to connect and start discussions about future research activities. The final phase involved a series of participatory workshops held in Surabaya and Bali that brought together craft producers and producer organisations to share their experiences and explore areas of common interest. These were led by Zulaikha and Kadek and utilised some of the methods and strategies introduced by Hanson (Academic and Co-Investigator SHU) in the UK creative making symposium.

2.4 Fair Trade principles

A critical aspect of the Making Links 5 research project was ensuring that the process was underpinned and guided by the Ten Principles of Fair Trade as set out by the World Fair Trade Organisation (WFTO) These principles illustrated in (Figure 1) offer a road map for best practice for working with marginalised producers to establish "a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade." (WFTO 2016)

Figure 1: World Fair Trade Organisation: Ten principles of fair trade. ©WFTO

In order for these principles to guide the research activities in addressing the SDGs it was imperative to ensure that a member of the research team could bring this knowledge and perspective which resulted in the Founder

and Director (Cave) of Just Trade UK Ltd (2019) joining the team.

3. Craft in East Java – Jombang glass bead making

The craft industry in East Java is a part of culture that is deeply rooted in Indonesian society. Located in both rural and urban communities, most would be classified as Small and Medium Enterprises. The Republic of Indonesia's Ministry of Tourism and Creative Economy's 2014 report, Creative Economy: Indonesia's New Power towards 2025 (Kementrian Pariwisata dan Ekonomi Kreatif 2014) categorised the craft industry as a creative industry because creativity is seen as a major aspect. However, this categorisation is somewhat problematic in rural areas where most craftspeople rely on orders from buyers for designs that have been determined by the buyer. This is supported by Kembaren, et.al, (2014) who state that 'Unlike urban crafts that constantly create new innovations, rural crafts are not growing as rapidly as urban crafts'. This suggests that a lack of design skills is a major challenge for rural craftspeople.

In Zulaikha's research study, Collaborative learning in the Rural Indonesian craft industry, (2014) three types of craftspeople were identified in the rural area of Jombang in East Java (p.112), which she categorised as; Craft-Maker, Craft-Entrepreneur and Craft-Designer. In this context, a craft-maker is a craftsperson with bead-making skills. A Craft-Entrepreneur is a craftsperson who takes risks, usually owning their own business, realising the importance of relationships and networking and being proactive in branding and marketing. A Craft-Designer is a craftsperson who is keen to make new designs and take innovative steps. This distinction was not intended for a strict classification of craftspeople; but to give a description of their attitude towards crafts and their involvement within it. Zulaikha's research involved twenty six main participants and the diagram below (Figure 2) illustrates how they were categorised using this framework.

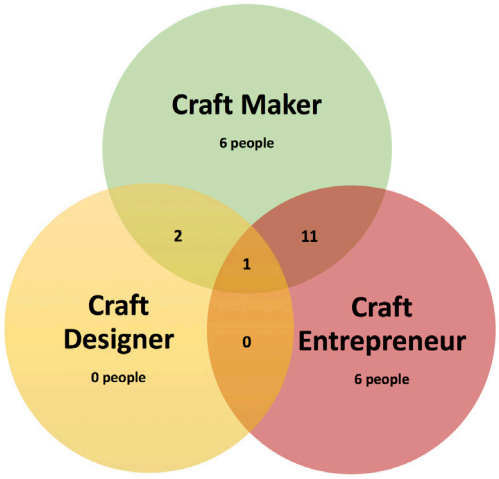


Figure 2: Type and number of craftspeople who participated in Zulaikha's research (2014). ©Making Links 5 Author image

As can be seen a high number of craftspeople are craft-makers and craft-entrepreneurs, but not craft designers. This seems ironic when a key value of a crafted product is

its design. Zulaikha's research also revealed that although rural craftspeople often collaborate with designers, it is the designer who is the decision-maker and therefore becomes the author of the product. She recognised that when craftspeople act as manufacturers to serve the designer's decisions, this can potentially lead to local craftspeople being exploited, with limited power within the craft value chain.

Advancing the design skills of rural craftspeople is a challenge, which is affected by a number of internal and external factors (Zulaikha 2014). Externally, the uncertainty of trends and the global economic crisis in the late 2010's caused a significant decline in income for the crafts industry. In addition, craftspeople face competition from imported products with lower prices and more consistent quality. Internal factors relate to limited resources to aid the development of design and business skills, limited equipment and availability of materials, and lower bargaining positions compared to traders, designers, and buyers. There also exists internal conflict between craftspeople who contribute to the complex development of the handicraft business and those that do not. However, despite these difficulties, there are opportunities to develop this industry, which is supported by local government through an annual assistant program fund to support initiatives that will strengthen the community and enhance the social capital of artisans. It is therefore pertinent as proposed by Woolley's proposition of craftspeople moving from a personal paradigm of making to the broader paradigm of production, (Woolley 2011) to consider design thinking as an appropriate methodology for enhancing the design skills of rural glass bead craftspeople.

4. Case study - Methodology

This case study project uses Participatory Action Research (PAR) methods, (Swantz 2008) involving co-creative design thinking workshops that are situated within the terrain of Design Anthropology (Gunn 2012). Participatory Action Research has its roots in "action research" (Lewin 1946) whereby a researcher, through appropriate activities, facilitates participants to find solutions to their own problems (Huizer 1979). The essence of this methodology is to create a more democratic approach, that removes hierarchical top-down decision making to change the paradigm of the owner of knowledge being the main recipient of decision making (Kindon 2007). By involving participants in collaborative activities there is a move away from the mere transferring of knowledge to a position of producing knowledge (McTaggart 1991) & (Park 1993). A key element to the success of participatory projects is effective communication, which begins with the facilitator building trust and a close relationship during the initial stages of the process. It is also important for facilitators to be mindful and knowledgeable of the context they are working, and to be sensitive to local culture and politics.

Human beings naturally develop thinking patterns based on repeated experiences and knowledge that they already have. The learning theory proposed by Jean Piaget (1964) suggests that knowledge is composed of schemas, (basic units of knowledge) used to organise past experiences and serve as a basis for understanding new ones. However, when repetitive activities become embedded, they have the potential to prevent the development of new ways of seeing, understanding, and solving problems. Design thinking provides a methodology to think 'outside of the box' and has been widely applied in many fields of practice, providing a framework to ask questions and challenge assumptions. Much has been written about design thinking in relation to the stages/phases that are

embodied within it (Brown 2011) (Design Council 2007). All variants are very similar, but in the context of this research the Five Phase Design Thinking according to the Hasso-Plattner Institute of Design at Stanford (d. school) (Interaction Design Foundation 2002) is particularly important in relation to how to 'challenge assumptions' and how to 'prototype to test solutions'. These are both fundamental in the development of new craft products, where the iterative process is key in being able to identify alternative possibilities and solutions. By avoiding solutions too early and allowing a non-sequential and holistic way of exploring concepts and ideas through the use of experimental sketching, material testing and prototyping, can lead to unexpected outcomes (Norman 2013).

5. Making Links 5: Case Study Project

5.1 Summary

This section will present and discuss the case study project Making Links 5: craft value chain. As highlighted in section 2.3 this builds upon Initial research and networks established during the 2017 AHRC, Creating, Connecting and Sustaining Links with the Indonesian Craft Economy project. Reflection and evaluation of this earlier research had revealed a need for future activities that would focus more on understanding and facilitating product identity and cultural capital, the importance of design as a process (idea generation, methods of making and material quality), specific skills training and development of low technology tooling. In order to respond to these, the Making Links project was devised to be applied to a defined craft discipline where members of the research team had extensive specialist knowledge and practice; glass bead production and metal jewellery making.

The overarching aim of the project was to improve the economic livelihoods of craft producers in Indonesia through the strengthening of links and co-creative collaboration. The ambition being to establish a sustainable model/ system for a long-term fair-trade route to market (including export) through collaborative practices in the development of new artisan craft products.

This partnership project is a collaboration between the UK and Indonesia. The core team of five people consists of a UK academic researcher, a UK fair trade social entrepreneur; both trained and practiced within the field of jewellery and an Indonesian academic with expertise in collaborative learning in the Indonesian rural craft industry. A Javanese design graduate with knowledge of sustainable craft cooperatives and a Balinese craft facilitator with European export market experience completed the team. The breadth of skills and expertise brought by the team was crucial in being able to deliver this project. 'Building relationships matters' (Field 2008) creating social capital that enables things to be achieved collectively that would be incredibly difficult to do alone.

Activities spanned a seven month period from January – July 2019 and were structured into three defined phases:

- Phase 1: Field research and data collection
- Phase 2: Data analysis, co-creative workshop planning and workshop logistics.
- Phase 3: Field work: co-creative workshop delivery

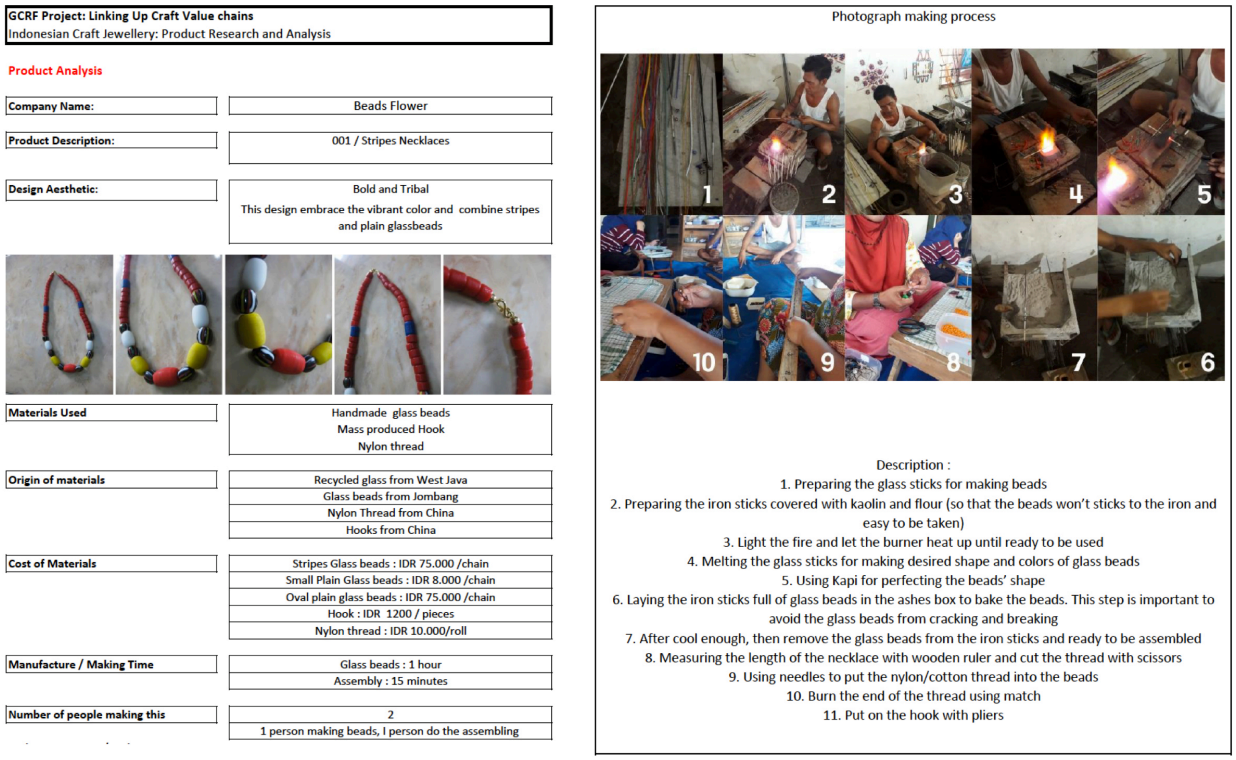
5.2 Phase 1: Field research and data collection

Phase 1 involved field work to collect data about craft makers, organisations and craft products made within the Jombang region of East Java and was undertaken by the Academic researcher in Indonesia (Zulaikha) with her graduate designer Larasati. The focus for this was on people, workshop facilities and products being made using glass beads and metal jewellery components. The rationale for this review was to better understand the current landscape of practices which would inform the structure for the co-creative workshops to be facilitated by Hanson and Cave in Phase 3. Restraints in terms of time and resources did not permit a comprehensive review of all activities in the region and the focus was on three key registered organisations where researchers had initial contacts. Two were glass bead making and bead weaving enterprises and the third was a metal jewellery enterprise. In total fifty seven people were employed within these with twenty eight recorded as being on the payroll and twenty nine working freelance within the informal economy. The questionnaire used supplemented by photographic documentation focused on the following areas

- Product Identity, cultural relevance, provenance and design aesthetic
- Materials used and the source of these – Indigenous or imported
- Material suppliers and costs
- Workshop facilities, tools and processes used
- Time taken to manufacture and price artisan charges to sell
- How products reach the consumer/market?
- How products are packaged?

It was not possible to gain detailed information for all products made especially in relation to product identity and design aesthetic, which required a more qualitative response. However, Larasati was able to discuss with participants informally and produce some very useful data. The descriptive responses to the design aesthetic included; bold and modern influenced by Indian style; vibrant complex patterned glass; simple and elegant preferred by foreign customers; classic and traditional influenced by Balinese traditional pattern. These insights gained, along with information about workshop spaces, material resources, craft skills and tools used were invaluable in understanding logistically what might be possible to undertake in a co-creative workshop scenario and the opportunities this presented.

It is also not within the scope of this paper to present and analyse this data in full, but the example shown in (Figure 3) illustrates some of the questions covered and the format that data was collected.



GCRF Project: Linking Up Craft Value chains
Indonesian Craft Jewellery: Product Research and Analysis

Product Analysis

Company Name:	Beads Flower
Product Description:	001 / Stripes Necklaces
Design Aesthetic:	Bold and Tribal This design embrace the vibrant color and combine stripes and plain glassbeads
Materials Used	Handmade glass beads Mass produced Hook Nylon thread
Origin of materials	Recycled glass from West Java Glass beads from Jombang Nylon Thread from China Hooks from China
Cost of Materials	Stripes Glass beads : IDR 75.000 /chain Small Plain Glass beads : IDR 8.000 /chain Oval plain glass beads : IDR 75.000 /chain Hook : IDR 1200 / pieces Nylon thread : IDR 10.000/roll
Manufacture / Making Time	Glass beads : 1 hour Assembly : 15 minutes
Number of people making this	2 1 person making beads, I person do the assembling

Photograph making process

Description :
1. Preparing the glass sticks for making beads
2. Preparing the iron sticks covered with kaolin and flour (so that the beads won't sticks to the iron and easy to be taken)
3. Light the fire and let the burner heat up until ready to be used
4. Melting the glass sticks for making desired shape and colors of glass beads
5. Using Kapi for perfecting the beads' shape
6. Laying the iron sticks full of glass beads in the ashes box to bake the beads. This step is important to avoid the glass beads from cracking and breaking
7. After cool enough, then remove the glass beads from the iron sticks and ready to be assembled
8. Measuring the length of the necklace with wooden ruler and cut the thread with scissors
9. Using needles to put the nylon/cotton thread into the beads
10. Burn the end of the thread using match
11. Put on the hook with pliers

Figure 3: Making Links 5: Data Collection Sheet – Artisan products, Jomabang, East Java, Indonesia. April 2019. ©Making Links 5. Author image

5.3 Phase 2: Data analysis, co-creative workshop planning and workshop logistics

The second phase of the project involved activities in both the UK and Indonesia. Analysis of the photographs of the crafted products made in Jombang reinforced Zulaikha's earlier observations about limited design input in determining the style and aesthetic of craft-making in rural communities. Designs were very generic and could have been made by artisans is a number of places around the world. Representations of form, pattern, colour and composition in individual products were either very 'typical' or somewhat arbitrary, with a lack of discernment in certain details and finish. It was clear that initial stages of the workshop needed to focus on design as a process and to facilitate activities that emphasised ways to generate ideas and design thinking.

Informed by the creative making day held at SHU in 2017, Hanson and Cave developed a workshop structure of cumulative design activities. The schedule was devised so that the active co-creative elements would be punctuated by a series of short presentations. This would allow the researchers to bring the group together to collectively share, discuss and ask questions. Having worked in many artisan communities around the world the researchers discussed the need to be agile during the workshop and to respond appropriately, making changes and adjustments to the flow and content if the situation and response of participants required. Visual and material resources were developed to use within the workshops and created in ways that would allow for both digital and analogue use, depending upon resources available in the country on the day.

The first phase had allowed the in-country team to identify possible locations for the co-creative workshop to take place and provided routes to recruiting participants. A decision was made early in the project that three consecutive days would be the maximum amount of time for participants to join this kind of event and that any longer would be problematic in terms of their individual work/home commitments. An agreement was made to set up the workshop at the family run Bead Flowers enterprise located in the village of Plumbon Gambang in the region of Jombang. The owner who in Zulaikha's earlier study (Zulaikha 2014) was categorized as an Entrepreneur, Designer and Craftsperson is well respected in the community and locating this design and making workshop within his facilities gave a credibility to the event with participants, other artisans in the community and the local council and government Ministers.

This space allowed the researchers to build upon previously established networks. Not only had Bead Flowers been included in the survey of artisans in Zulaikha's PhD research, but it had also been the site for a craft project with some design students from ITS and had been visited by Hanson during an earlier scoping trip. Larasati had visited Bead Flowers during stage 1 of the research project, taking photographs of the spaces, organising recruitment of participants and other logistics such as dates, times, and hospitality. Funds from the GCRF were used to hire the space, pay for materials, provide hospitality during the workshop and a transport fee for each participant.

5.4 Phase 3: Field work: co-creative workshop delivery

The project team came together in Surabaya, East Java, two days before the workshop was to take place. This allowed a day for final discussions and preparations and for the purchasing of materials and resources for the workshop activities. The space to be used was situated behind the Bead Flowers shop and the layout enabled us to create 2 defined areas. One area that we would consider to be more of a creative design studio for presentations, discussions and creative drawing and model making activities and the other set up more as a production workshop for working with metal. Hanson and Cave had brought some specialist jewellery making tools from the UK in order to introduce and teach some fundamental metalworking skills. These tools were supplemented by one of the metalwork artisans participating in the workshop, who provided some key equipment including a portable soldering torch and polishing motor.

The three-day workshop involved seventeen participants of which eleven were men and six were women. They worked within six different craft-making enterprises and identified themselves and their specialist skills in the following seven categories.

	Skills Category	Number of Participants
1	Entrepreneur/business owner	3
2	Marketing	1
3	Raw glass processing	1
4	Glass Bead maker	7
5	Bead Weaver	5
6	Silver/Metal craftsperson	2
7	Batik work	2

As Participatory Action Research (PAR) is concerned with the democratisation of knowledge making and inequalities of power (Chevalier 2013) it was important for the researchers to connect with the participants on a human level (Hanson 2016). Having a team from different backgrounds, cultures and religions brought a strong diversity that enhanced the event, creating a sense of openness and inclusion. The three members of the team from Indonesia were all bilingual and although some of the participants had some English language ability, effective translation was a fundamental part of facilitating activities.

5.4.1 Workshop - DAY 1

The first session began with getting to know participants, starting with a short name-badge making activity which everyone wore throughout the event, making it possible to learn each other's names. Hanson and Cave then shared something of themselves and their lives in the UK through a series of visual slides that were projected in the studio space. This was followed by Zulaikha, Larasati and Kadek giving brief introductions about themselves and an overview of the workshop structure. The studio space had been prepared with a carpet enabling us all to sit together on the floor as equals. An icebreaking activity had been prepared, where participants each chose two random questions from a hat which required them to share something personal. The variety of questions from serious to funny included things about food, family, culture, work, and politics; giving everyone the opportunity to speak in the first hour of the session.

The Indonesian word for bead is 'manik-manik' and in order for participants to connect creatively based upon something familiar, the first design exercise used the conceptual starting point of designing a beaded necklace for a Giant. This turned out to be very serendipitous as unbeknown to the researchers from the UK, the Gajah Mada (which translates as Elephant General) is known as the Javanese Giant in the mythical kingdom, who in paintings and sculptures is depicted with a bare chest wearing a large necklace. In order for participants to break away from what they know, the team had brought a large selection of local fruit, vegetables, tinned and dried packaged food stuffs to be used as materials for creative model-making. In groups of three to four, participants worked quickly creating a compositional arrangement for a necklace, using as many different components as they wanted. This exercise was repeated five times over a timescale of one hour, with additional instructions given each time. This included only being able to use two ingredients, using two ingredients with contrasting shapes and creating a non-symmetrical composition.

Although almost everyone had mobile phones with cameras, after each stage a

polaroid image was taken of the outcomes and pinned up in the studio space, creating a chronological documentation that showed this iterative process in a very immediate way. The session was interspersed with informal discussions and feedback and at the end a more formal open discussion with the whole group took place.

Figure 4: Making Links 5: First stage artisan prototypes, Co-creative workshop. Jomabang, East Java, Indonesia. June 2019 ©Making Links 5. Author image

The next session was a digital presentation that began to map out 'design' as a process and not an end product. It reinforced the principle that there are no wrong answers, only different ones and that in order to generate creative ideas we need to feed the creative process. Having undertaken the first stage of prototyping using materials that were familiar, participants were able to easily engage in the process in a spontaneous way. The next creative session built upon the first and participants were asked to split into pairs, reflect on the initial compositions made and choose two main ingredients to work with. They were asked to make a series of test pieces by deconstructing (cutting and carving) and reconstructing with a series of secondary materials that included threads, wire, elastics, pins, and clips. During this activity discussions revolved around material qualities, colour, pattern and texture. The final session of the day was to bring together the two stages and make a necklace that could be physically placed on the body and photographed in context. These second stage prototypes were then displayed on a scroll of white paper laid out on the floor as an exhibition.

Figure 5: Making Links 5: Second stage artisan prototypes, Co-creative workshop. Jomabang, East Java, Indonesia. June 2019 ©Making Links 5. Author image

5.4.2 Workshop - DAY 2

Day one had concluded by asking participants to bring an example of a piece of jewellery they had previously made or helped to make. These were displayed in the design studio on white paper with name labels and would act as comparative objects as the workshop progressed. Activities began with a brief overview of the previous day, reinforcing that design is a process that involves a series of stages. The researchers used the printed version of the earlier presentation given, pinning it to the studio wall so that it was visible, and would enable connections to participant prototypes to be surfaced. The rest of the morning session was spent within the workshop space. Members of the Indonesian team had organised for six of the participants with different specialist skills to give short skills demonstrations to the rest of the group. This involved two glass bead makers, two bead weavers and two metal artisans. Working in this way allowed us to cover a breadth of content and empowered the artisans. Although for some this was quite a daunting experience it gave Hanson and Cave an opportunity to understand their making practices, and to be able to build upon existing knowledge in a positive way.

Figure 6: Making Links 5: Artisans sharing skills, Co-creative workshop. Jomabang, East Java, Indonesia. June 2019 ©Making Links 5. Author image

The afternoon session started with the artisans in groups of four being asked to select a prototype from the first day and collectively analyse and evaluate both the compositional arrangement and individual component parts. They were then to consider how they might start to translate a particular element into metal taking into account the knowledge gained from the morning session. Using simple drawing and card model making they began to visualise ideas, thinking about scale and material thickness.

The next few hours were quite chaotic but with an amazing energy and excitement. The somewhat makeshift working areas created a challenge as the heights of benches and chairs were not ideal, but everyone worked with care and enthusiasm. The two metal

artisans were very generous with their knowledge and time helping Hanson and Cave assist the other participants as they developed some basic skills. The artisans and researchers moved between the studio and workshop space with ease. Interspersed with material and making, further drawings and model making in card took place as design ideas were developed. Discussions very much like the studio tutorials that happen within the UK art and design educational system emerged, enabling cross fertilisation of ideas, thinking and decision making. The success of this second day was made visible when nobody wanted to go home, and activity continued for a further two hours. The third stage prototypes were then displayed alongside the initial prototypes extending the exhibition further.

5.4.3 Workshop - DAY 3

When the research team arrived at Bead Flowers on the third day most of the artisans were already there and working; some had started at 6.00am. A short presentation by Cave introduced the concept of creating collections of jewellery (and other craft products) which provided the focus for the day. Using examples of collections made by Just Trade artisan groups in Peru, Ecuador and India, she was able to illustrate by presenting the idea of making 'families' of jewellery. All participants were given a Just Trade catalogue and were able to understand through the images, how forms, colour combinations, patterns, motifs, and surface finish are used to design cohesive collections.

As had been done with the fruit, vegetables, and foodstuff on the first day, the next session began by laying out a selection of glass beads in the center of the studio space. These had been pre-selected by the researchers based on size, shape and colour combinations, but provided great variety and possibilities. Working collaboratively in four groups, the participants selected beads and created shapes cut out of card to represent metal elements, making quick compositional arrangements for a necklace informed by previous prototypes. This iteration of creative methods was now becoming familiar and the recording of outcomes using polaroid images allowed for multiple ideas to be generated with ease providing immediate records to refer back to.

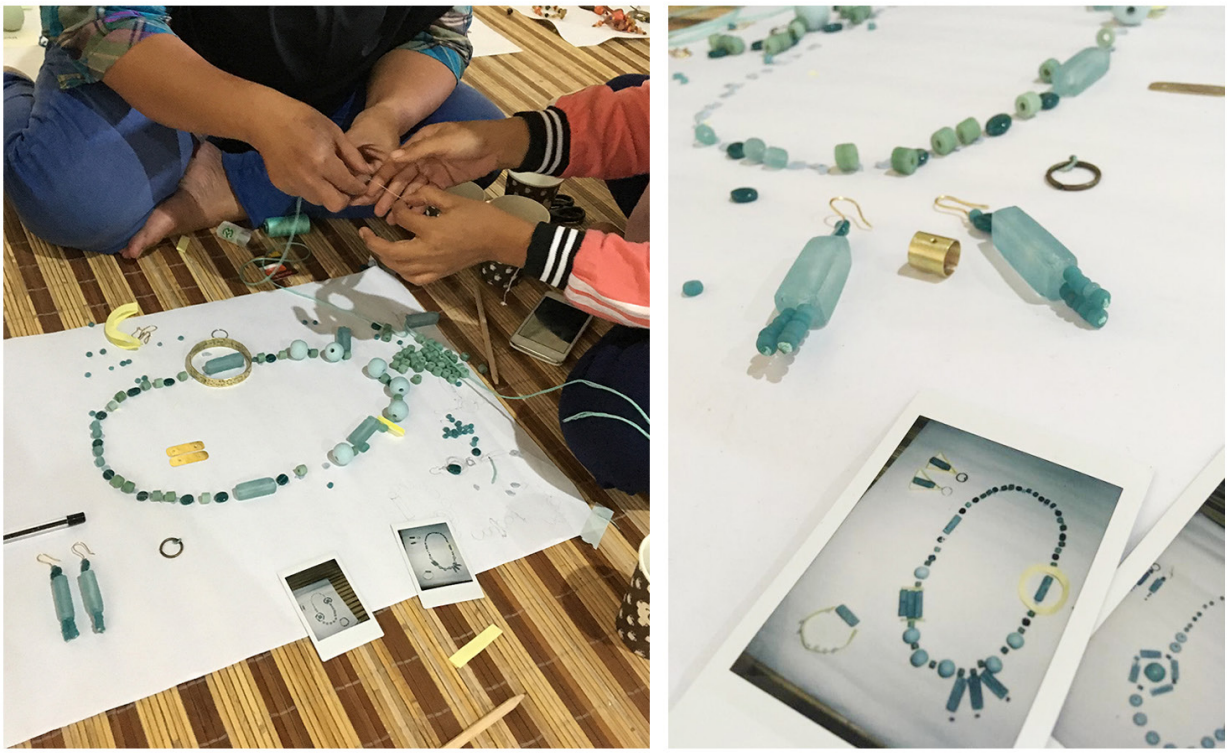


Figure 7: Making Links 5: Work in Progress, Artisan prototypes, Co-creative workshop. Jomabang, East Java, Indonesia. June 2019 ©Making Links 5. Author image

Each group was made up of participants with a range of skills and expertise which enabled collective discussion, problem solving and decisions to take place. The nature of designing through making allowed the UK researchers to transcend any difficulties with language and to respond visually, ask questions and give advice in a meaningful way. Although there were moments when participants wanted to be told what was right, in the spirit of design thinking the researchers responded by asking further questions. As the day progressed with no formal lunch break the creative energy and productivity increased. As the construction of the necklaces developed with the skilled expertise of the bead weavers, other group members began making additional components for earrings and bracelets that would create a cohesive collection.

As the fourth stage of prototypes were being finished, the research team set up a more refined exhibition space using subtle colours of sheet felt on a wooden table. As the finished jewellery was arranged with earrings placed into simple white card and the necklaces laid flat, the perceived value of these artefacts was elevated. The response by the participants to the cumulative way of working throughout the three days was clearly evident through their reactions to seeing their new design ideas presented in this way. The workshop concluded with the participants completing a feedback and consent sheet, the presentation of certificates of participation, a final reflective discussion and of course the very important photo shoot.

Figure 8: Making Links 5: Final artisan prototypes, Co-creative workshop. Jomabang, East Java, Indonesia. June 2019 ©Making Links 5. Author image

5.5 Feedback from participants

At the end of the workshop all the participants completed a simple evaluation and consent form that had been prepared in both Javanese and English. This gave us the opportunity to accurately capture details about the enterprises they work for/with and their individual specialist skills.

Everyone was very positive about their experience. The following is a summary of some of the questions and responses:

Question	Response	No. of Responses
What new design and making skills have you learned?	• How to combine materials • Asymmetrical design • Using test pieces • Metalworking skills • Composing designs and variations • New experience and art evaluation	9 4 1 9 4 1
What did you expect to gain from participating?	• A new design experience, know other design outside Jombang and Indonesia • New knowledge about design • New knowledge about market	2 8 2

Question	Response	No. of Responses
What was the best part of the workshop?	• Everything especially designing with fruit and food • Togetherness/group activity • The way the facilitator teaches us • Creating innovative design/new design • Experiences from other participants • Inspired to create different designs	3 4 3 4 2 2
What would you like to have in the next workshop?	• Have another workshop soon • How to make catalogue and display • more time • explore more creation	10 1 14 2

6. Reflections

Immediately after the co-creative workshop in Jombang, the team came together to reflect on what had been achieved, what had been challenging and what opportunities presented themselves for the next stage.

They recognised that the depth and breadth of the material generated throughout the workshop had only been possible to achieve because of the cross cultural and combined professional experiences that were brought together by the team. Although the aims of the project were very ambitious, the structure, content and underpinning methodologies of the workshop had provided the opportunity for the craftspeople to produce their own knowledge and discover their own potential and strengths. The use of local food products as design inspiration was a provocative way to encourage design thinking by situating within their daily contexts. It allowed for the emergence of creative thinking by using new perspectives to redefine things around them, that could become a potential design inspiration in the future. As the workshop involved craftspeople from various backgrounds and making skills, they generously shared knowledge through collaborative mutualism, which strengthened confidence and enabled them to produce new prototype designs. This transparent, collaborative approach allowed for all stakeholders to have pride and a sense of shared ownership in the work; this method also ensured that the complex path of cultural appreciation vs cultural appropriation was navigated with mutual respect. The production of four collections of new jewellery designs in just three days, which are suitable for exhibition and with the potential to be developed for the export market was incredibly heartening.

The team felt that on reflection it would have been useful to undertake a questionnaire at the start of the three days as well as the end, in order to better understand what participants had expected at the start and had experienced/gained by the end. They also felt that subsequent workshops should be situated within a neutral space that did not specifically relate to, or be identified as, a single enterprises domain. It is also important to note that although Zulaikha's earlier research had focused on the artisans who made glass beads being categorised as craft-makers it was clear from the participatory work done here that the region had many other craft-makers including those with bead weaving and batik skills.

Cave strongly believes that a collaborative approach to design and product development leads to better products and a more sustainable long term equitable working relationship. The use of market intelligence and sales statistics should also be used to inform this process, in order to ensure that there is market demand for what is being developed. Although costing and pricing was touched upon, there was not enough time to go into this in enough depth and this along with presentation, marketing and branding were identified as areas that still needed input.

As a young graduate designer Larasati felt that this kind of workshop initiative could be expanded through the establishment of a co-operative association, which over time could facilitate an ongoing training program. This stimulated discussion about ways that workshop facilitators could train others who then train others to create a snowball effect, which would move towards a more sustainable model for the future. This presents new opportunities for the next stage that would not just benefit artisan groups in Indonesia but would have the potential to reach out to artisans around the world and be applicable to multiple crafts and contexts.

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