


Please cite the Published Version

Kelly, Rachel  and Stephens, Michelle (2019) The Digitization of Cordillera Weaving: Designing a New Oral Tradition. In: IASDR 2019, 02 September 2019 - 05 September 2019, Manchester Metropolitan University.

Publisher: Manchester Metropolitan University

Version: Published Version

Downloaded from: <https://e-space.mmu.ac.uk/623720/>

Usage rights:  In Copyright

Enquiries:

If you have questions about this document, contact openresearch@mmu.ac.uk. Please include the URL of the record in e-space. If you believe that your, or a third party's rights have been compromised through this document please see our Take Down policy (available from <https://www.mmu.ac.uk/library/using-the-library/policies-and-guidelines>)

The Digitization of Cordillera Weaving: Designing a New Oral Tradition

Kelly, Rachel; Dr Stephens, Michelle.

Manchester Metropolitan University, Manchester UK

Rachel.kelly@mmu.ac.uk

m.stephens@mmu.ac.uk

This paper is a review of a 2019 British Council & Crafts Council / Crafting Futures project to support Creating a Sustainable Textile Future for Women via the Digitization of Cordillera Weaving Tradition (CSTFW). The CSTFW project has developed a Learning Tool Kit and Design Tools to support the preservation of a weaving tradition which forms part of the cultural heritage of indigenous communities who live in the mountainous Cordillera region of the northern Philippines. The Crafting Futures scheme supports projects which address "a sustainable future for craft around the globe". It has been identified that while Cordilleran weaving has the status of National Heritage within the Philippines, the numbers of community weavers able to practice is dwindling. The Cordillera Textiles Project *CordiTex* led by Professor Analyn Salvador-Amores from University of Philippines, Baguio, which is proposing to digitise Cordillera Weave Tradition to ensure its sustainability, study and preservation. This paper will present findings from the CSTFW project, which raise the voice of oral craft traditions and explore the opportunities digital tools and methods may play in sustaining a future for global craft practice. This paper explores the heteroglossia of oral tradition, where multiple voices play a part in oral traditions and their discourses. If the weaving tradition of the Cordillera is to endure and transform from the problems it faces, what type of support will the shift from of an oral to a digital tradition require? This paper aims to consider this concern via a discussion of project-based research evidence and reflection.

Keywords: *Crafting Futures; Voices; Oral Tradition; Digitization; Weaving*

1 Introduction

In the Cordillera region in the north of the Philippines, there is a rich tradition of weaving that is cultural, functional, and which represents the artistry of the numerous ethnolinguistic groups living in the region. Weaving knowledge within the Cordillera is not held in a written form but is passed on via an oral tradition where the master teachers of weaving are now elderly women. The impact of the oral tradition as an unwritten knowledge base for Cordillera weaving is now in a critical state and the weaving tradition may become extinct

"The focus of the CordiTex research was conducted among the Tinguian of Abra in northern Luzon, who had scarce documentation of its weaving tradition, but revealed the most intricate designs based on the collections from the museums in the US. The weaving declined in the 1980s, and only one Tinguian community in Manabo, Abra is still weaving, and natural dyeing is revived in Penarubia, Abra. Most of the master weavers are elders and many who passed away without transmitting knowledge to the younger generation" (Salvador-Amores 2018)

While the CordiTex project's rationale is to preserve Cordillera Weaving Tradition via the digitization of the weaving patterns, this raised an opportunity to investigate the diminishing numbers of younger weavers working in this tradition. There was an opportunity to evidence of the human impact the loss of this weaving tradition will create in the lives of both the women weavers and lives of the population of this area. The CSTFW project forms a bridge between CordiTex project and the British Council Crafting Futures rationale. The CSTFW project wanted to work with weaving groups from the Cordillera to investigate the loss of cultural weave heritage within the region and to ask how such craft practices, if preserved via the digitization process can support the livelihoods of women.

The groups of weavers from the Cordillera are identified by their ethnolinguistic languages and represent cultures which use their language to represent identities specific to place, ritual, belief, work, culture. Within the CSTFW project we are interested in considering the objectifications and agents of identity which are woven into the objects and textiles the Cordilleran communities make and use.

'Identity is a concept that figuratively combines the intimate or personal world with the collective space of cultural forms and social relations'
(Holland, Skinner, Lachicotte & Cain 1998:5)

Weavers from the Ifugao, Ga'dang, Kankanaey, Ibaloy, Ilocos and Tinguian groups and weavers from Bontoc, Abra, Manabo and Mindoro areas were identified to participate in the project. The uptake of weaving amongst younger women in these communities, is diminishing and the CordiTex project is working to preserve aspects of the weaving tradition via the digitization of the weaving process. The development of a digital rationale as a methodology for preservation is explored within this paper. In addition to the initial remit of the Crafting Futures project Kelly and Stephens began to develop research questions which ask what impact the digitisation process will have upon the voices and identities of the Cordillera.

2 Research Methodology

Part 1: Study of the traditional weave samples within the Museum Kordillera, Baguio; The National Museum of Philippines in Manila and National Museum of Vigan in Ilocos Sur.

The collections viewed are significant in terms of their rarity in anthropological terms and include examples of weaving tools, back strap and foot looms, ritual artefacts and historical ethnographic photography. A second purpose for the museum visits was to examine Cordillera Textiles first hand to explore the weave structures via a process of draft notation or weave drafting.

"draft notation uses graph paper as a framework. The space between its evenly spaced verticals is understood to indicate the warp threads, that between the horizontals, spaced similarly and intersecting at right angles, the filling threads. The little squares thus formed denote the intersection of warp and weft... of course more than the thread construction has to be identified in the analysis of a cloth...when these facts have been established, all the information required for the reproduction of a cloth has

been ascertained, for the procedure of weaving is merely a matter of inference” (Albers, 2017: 22)

Part 2: Field visits to five Cordilleran weaving communities in Kiangen, Abra, Manabo, Santiago and Mindoro.

The aim of the field visits was to undertake field research to gain an understanding of the research problem which asks, ‘the potential of craft to improve the livelihoods of women’ (British Council, 2018). Qualitative research activities to capture evidence and data for the project, included community, field and weaving practice observations, ethnographic interviews and documentation by film, sound, and photography. The visits also gave the project partners the opportunity to introduce the CordiTex and CSTFW project to the weavers and their communities.

Part 3: A Learning Tool Kit Development Workshop held at The University of Philippines in Baguio.

A *Learning Tool Kit* workshop was delivered to key stakeholders from the communities. The workshop was organised with support from the University of Philippines in Baguio and the CordiTex team and Cordilleran weavers travelled from remote and diverse locations across the region and Philippines to attend. The workshop included a *Design Thinking* (Cross 2011) workshop, a weave drafting workshop and a collaborative reflective plenary. Stephens remarked that she had never had such a positive response to her weave drafting workshop in previous teaching experiences.

Part 4: Dissemination of Learning Tool Kits to weavers and stakeholders in The Philippines.

A *Learning Tool Kit* framework was developed by Kelly & Stephens and included the provision of 10 small loom kits for apprentices.

CSTFW 4 Practice Strands for the Learning Tool Kit/2019			
Active Practice	Networked Practice	Innovative Practice	Sustainable Practice
<p>The oral tradition of weave learning from master to apprentice is time consuming, but effective. The teaching - learning dynamic of master / apprentice is normally a closed loop. The changing circumstances of the Cordillera region and Philippines is also resulting in a decline in young people wanting to learn to weave.</p> <p>Active Practice Actions:</p> <ol style="list-style-type: none"> 1. Weaving learning can be made more efficient through the use of small portable sample looms, because they encourage independent, quick, low resource, creative weave learning to take place in a variety of settings. 2. Small sample looms enable learning to develop in a constructed manner by way of a spiral of knowledge development where learning leads to learning development in a progressive pattern. 3. Within the oral tradition, apprentices become masters and then masters teach. The cycle is regenerated in each generation, but this is a slow process. The apprentices do not teach until they are masters. The use of small sample looms encourages independent weave learning beyond the traditional learning environment to a practice-led model where apprentices can learn independently and experientially as well as by instruction. 4. A family-based system where children as well as apprentices are encouraged to learn to weave in the home with their family. This play led learning using child led patterns could also be linked to K-12 curriculum. 	<p>Weavers within the Cordillera are working within a very small field, yet their communities are disconnected.</p> <p>Weavers need to connect together as a community of practice. Such a community could open the door to opportunities a larger and diverse wider weave network could bring.</p> <p>Networked Practice Actions:</p> <ol style="list-style-type: none"> 1. A network across the Cordillera is required to both enable knowledge, resources and economic opportunities to be shared. Enable opportunities for weavers to exhibit and share their work beyond their community. 2. Develop a professional practice development programme for groups or individuals online or as workshops. 3. Create a supportive co-operative or community centred centre for weave education. This centre could form a hub for communication, training, opportunity development and sale of work. The centre could also link up with other programmes which are emerging to support the indigenous weave tradition including yarn resource and raw material supply and development organisations and climate change based support agencies. 	<p>Young people bear a heavy weight of responsibility for their ancestors history, rituals and practices.</p> <p>New young weavers need to be able to find their own weave language and to connect with the wider fields of design and craft.</p> <p>Innovative Practice Actions:</p> <ol style="list-style-type: none"> 1. Introduce weave drafting and design via weave development into the schools & HE curriculum. Tools for drafting could be provided with workshop support (both via education routes and online platforms). 2. Link weave drafting and design to the CordiTex project hub at the Museum to enable weavers to participate in advanced weave development. Enabling the journey from drafting, weaving and digital translation to be made possible. Enable weavers to engage with design and craft practice beyond their region to increase the overall level of practice based knowledge and understanding. The challenges of skills development must be challenged by the benefits the sustainability of the Cordillera weaving practice will bring. 3. Create a living Cordillera weave library for patterns and learning samples such as those being woven for the CSTFW project. Learning resources would be for weavers to use for free and to be easily accessible (a university for weave). Creating a cordillera weave hub to support innovation and research and enabling the hub to also be a centre to meet potential weave development partners. 	<p>Weaving needs to be sustainable to ensure knowledge is not lost because weaving knowledge which apart from traditional status, can enable weavers and their communities to access economic and educational opportunities.</p> <p>Sustainable Practice Actions:</p> <ol style="list-style-type: none"> 1. Develop K-12 weave curriculum from the perspective of a future facing paradigm to equip children and students with knowledge and skills to develop their heritage. The key idea is to develop child-led or a child centred weaving curriculum, to build onto the resources that are within children, capturing what is there in the communities to start as a seedbed to grow. Starting with the youngest children to enable weave learning to be embedded from a young age. Methods would include storytelling and creative narrative development. 2. Develop Higher Education weave curriculum to align with global textile education via joint validations and transnational initiatives and exchanges.

(Figure 1: CSTFW 4 Practice Strands for Learning Tool Kit 2019)

Part 4: The Digital translation of Cordilleran Patterns via TC2 Digital Loom.

The digitization of a selection of woven samples from the Museum Kordillera archive will be translated by Michelle Stephens. Fabrics produced will and be documented and will be used to inform the development of the *Learning Tool Kit*. The samples will then be exhibited at the Museum Kordillera in August 2019 and added to the museum's teaching collection.



(Figure 2: July 2019 weaving translation by Stephens; Figure 3: Dinapat Lime woven textile date unknown from CordiTex project archive)

The five parts of work created a suite of contexts within which new knowledge development could be identified and where data could be collected. Decisions on how best to plan the project were made based upon factors including;

- The need to pre-plan at a distance from the Philippines prior to field visit;
- The short timeframe for the field visit (8 days);
- The urgent need to document of the oral weaving tradition and examples of weaving practices from the communities.

The project research methodology was informed by a range of theoretical perspectives to ensure that the voices of the Cordilleran weavers and communities could be heard. Therefore, while Kelly and Stephens undertook phenomenological and ethnographic approaches which included observation, participation and Deep Hanging Out (Geertz 1998), the methods employed on return from the field visit included discourse analysis to enable post-positivist and post-structuralist interpretations to be undertaken to distinguish between the context of the situation with the evidences of culture which were captured (Lee & Poynton 2000). A *Design Thinking Cycle* (Cross, 2011) was employed to move the research from *Understanding to Exploration and Materialization*. A Theory of Change (Nesta, 2018) model was also utilised at different stages of the project and proved a very useful framework to help identify the project research questions, aims and outcomes.

Within the *Understanding* phase of the project, the examples which follow, demonstrate findings which resonate with the question of this paper which asks what impact the digitisation process will have upon the voices and identities of the Cordillera.

3 Understanding Cycle Activities:

3.1 The study of the traditional weave samples within the Museum Kordillera, Baguio and National Museum of Philippines in Manila.

Prior to January 2019, archive textiles images were sent to the UK project partners to illustrate the breadth and depth of variation in designs of the different Cordillera communities. The textiles had already been documented as part of the CordiTex project and the images provided an insight into the general patterns, cloth construction, patterning and colouring of the different regions. Visits to the Museums and archival collections highlighted the meaning and taboos held within the textiles and via related artefacts, photographs and cultural objects. The woven textiles are used as ceremonial cloths, burial cloths and clothing. The level of denotation of the cloth and/or their motifs was dependent of the group's own heritage. Initially, to the partner team as outsiders, the cultural value placed upon these cloths was overwhelming and difficult comprehend. The society of Cordillera Indigenous groups was traditionally "a society made up of small, dispersed, relatively egalitarian and acephalous, rivalrous groups, with an oral rather than written history and a reputation for wildness (e.g. headhunting)" (Rosaldo, 1980). Following the field site visits to meet the weavers, the close link between the museum collection and the connection to the communities visited became clear. A remarkable moment came when community weavers were taken into the CordiTex archives to view the work of their ancestors. This moment sits as a Learning Threshold (Meyer and Land 2003, 2005) crossed, because the weavers were able to learn and reflect upon the heteroglossia of their past, present and future voices present within the archive.





(Figure 4, 5 & 6: Workshop participants visit the cordite project archive at Museum Kordillera at University of Philippines in Baguio. Image Copyright Marlon Salvador-Amores).

3.1.1 Understanding the Textiles

In order to undertake a deconstruction of the patterns, it was vital for the partners to have first-hand interaction with the textiles to gauge cloth weights and colour. The weave translation process was conducted using the following methods:

- Technical notes
- Thread counts
- Photographic documentation
- Production of woven drafts

Drafting can be undertaken by any weave specialist (or keen novice) and is a binary language which can be translated by both hand and digital weave methods. It is implied within the oral tradition that the draft process creates a boundary object (Star & Griesemer 1989) where the feature of the weaving draft is its global commonality. What the oral tradition holds on to is the un-common nuances of textile language manifested in work which is crafted and made rather than designed. A concern with regard to any interventions into the traditional ways was raised during the *Learning Tool Kit Workshop* by Mr Marlon Martin from the Ifugao Heritage Weave Centre and also by Adelaida Lim who is the president of the Philippine Habi Textile Fair. The concerns raised have informed the rationale for this paper, to scrutinize investment into boundary object creating methods within the Cordilleran weave tradition context.

The Digitization of textiles is a growth area of Textile Design and conservation with work being undertaken at The Centre for Advanced textiles at Glasgow School of Art (Britt and Shaw, 2014) and by Anna Buruma who led the digitization of the Liberty of London archive (Buruma, 2007). Such examples of organised digitization have been undertaken *a priori* in that the digital translation has been made at a distance in time from the original textile making. The work of the CSTFW and CordiTex project can be done *posteriori* because the textiles are still, at the point of the writing of this paper, being made, so actual observable practice can be observed, documented and responded to.

The CSTFW project and *Learning Tool Kit* proposes to directly address any trouble or concerns with regard to authenticity (Adorno. 1973:7) because the *Kit* will empower weavers to author the process of translation themselves. To place control of the draft process in the weavers' hands, an authenticity, which if placed under the philosophical lens of Adorno (1973), will locate the culture of weaving within its historical process and will thus challenge the mystification or threat which an unauthentic translation methodology might create.

3.2 Field visits (Jan 2019) to weaving communities, workshops and home weavers.

3.2.1 Visit to The Ifugao Indigenous Peoples Education Centre and Community Heritage Galleries in Kiangnan.

Described as a *Living Museum* the heritage galleries feature a weaving workshop where traditional backstrap looms and Ikat warp dyeing methods are practiced. The centre is organized to receive tourist visitors who purchase textiles and observe demonstrations. The Ifugao Indigenous Peoples Education Centre and Community Heritage Galleries are run by Director Mr. Marlon Martin who is also Chief Operations Officer of the Save the Ifugao Terraces Movement (SITMo), which works to preserve the traditional rice terraces of the Cordillera.

Ifugao Society is still organized in a system where the *Kanadangyan* members sit at the top of the community as the most privileged class. Mr. Marlon Martin comes from the *Kanadangyan* class and his sympathetic approach as centre director is supportive of the underlying traditions of his community where the privileged always share their rice with the *Nawotwot* the landless poor at the bottom of this tribal system (Tolentino, 2018). Martin has

a sense of social justice, which despite his position at the top of this society, works hard for the preservation of Ifugao culture and to improve the livelihoods of the local community.



(Figure 7: Master Weaver in Ifugao. Image copyright Arnold Amores).

Our visit to Kiangan and our second meeting with Mr. Marlon Martin at The *Learning Tool Kit Workshop* was informative to our learning and understanding of the societies and tribes of the Cordillera and the origins of the indigenous weaving tradition.

- The Ifugao centre provides a support system for weaving where women work as independent master weavers, choosing their own hours and sell work as sold rather than by employment.
- Women work side by side on backstrap looms where they talk and share, learn and teach together in an oral tradition.
- The centre welcomes students and academics to study on site so the ethos of this weaving community is being exported and disseminated.

Martin's reflections shared both in Kiangan and at the *Learning Tool Kit Workshop* are that his community and culture is vulnerable. He identified that their tradition should not be viewed through a lens of history or as a relic of the past but of the present and future. Martin maintains the oral tradition as a foundation of his culture where the tensions between the central role of textiles within rituals, birth, feasts and funerals in this community conflict with the mainland of the Philippines and the wider world. A co-weaver who participated in the *Learning Tool Kit Workshop* reflected 'that cloth can also mean gold to the Ifugao' so any development which supports their community to trade textiles or textile knowledge, for her is very welcome. However, Martin also declared that many of the weavers he is working with live below the poverty line.

3.3 Manabo Weavers Association, Manabo, Abra:



(Figure 8: Manabo weavers drafting their weaves in their weaving garage. Jan 2019. Image M Salvador-Amores)

The Manabo community has a status and history that places it in a superior position in the hierarchy of weaver communities and culture, due to the complex weaving patterns and fine cotton used. Paradoxically, it is now in the position of being the community most at risk from the weaving tradition disappearing. Manabo is a new village still under construction, mainly consisting of breeze-block houses with foot weaving looms housed in a garage. From what we were told, the village had moved to this new location from their traditional area due to a change to growing tapioca rather than rice.

The women weavers we met were all united in their view as to why weaving was declining in their community via specifically, the lack of interest in young women to become weavers. The decline in weaving take up means that the end of weaving in the community will come when the older Master Weavers we met with die. Our host had arranged to collect a loom belonging to Master Weaver Teresita Obingayan to take back to the Museum Kordillera due to the lack of space in the garage space and because it was unlikely ever to be used again.

A shift in the dynamic of the visit came when Kelly & Stephens delivered an impromptu weave drafting workshop in a garage space. Stephens introduced the weave drafting process and showed examples of her work to the weavers on her mobile phone. Each weaver became interested in the process and was fascinated in the manner in which they could draft their weaving. During the impromptu workshop, the Drafting process became an expression of signature, where each weaver became the author of their Draft just as when on the loom they are the writers of their cloth. The weavers saw the potential to adapt or subvert the patterns to enable the expression of different ideas.



The concerns of the Manabo weavers are the lack of young people prepared or interested to take up weaving. There was a sense of despair that this is the situation. With this group in particular, the potential of weaving to be a good source of income should be developed. The contrast between the lack of space in the garage with the 'packed-in' looms with the freedom of space the draft process enabled was startling. The workshop ended with the weavers, sat outside in the fresh air at an outdoor table with the women continuing to draft their patterns after the project team had left.



(Figure 9 & 10: Manabo weavers drafting their weaves at an outside table in Jan 2019. Image M, Salvador-Amores)

3.4 Sabangan Weavers Association and local weavers at home/workshop in, Santiago and Mindoro in Ilocos Sur:



(Figure 11: 85-year-old Catalina "Talin" Ablog Weaving a Binakul Cloth at home in Jan 2019. Image R Kelly)

A visit was arranged to meet three elderly weavers and an apprentice weaver granddaughter in their homes in Santiago a village near to World Heritage City Vigan in the Ilocos Sur area. The weavers were 85-year-old Catalina "Talin" Ablog, 79-year-old Nena "Ibing" Aganon, and 75-year-old Felicitas "Petra" Espejo. In the first home we met master weaver Talin who is working in a home where she had lost sections of her roof in the December 2018 typhoons. There were aspects of high levels of actualizing experience (Maslow, 1943) demonstrated by these weavers in that they work independently, operate a professional business which is able to cost, weigh and measure fabric and they are masters in their craft. The manner in which the weaving has been a central part of their family's communities and the oral tradition which has enabled the weaving to be passed on is remarkable.

Concerns for the Sabangan women are their very low income. Wellbeing comes from the act or ritual of weaving rather than the income generated. Being a weaver is the identity taken by these women and they demonstrated this via:

- Their independence;
- Their work from home;
- Pride via photographs of work in the home.
- Participation in education projects;
- Family support structure and the connectiveness across generations;
- Direct selling;
- Peace at work – one weaver described her loom as 'her office'.



(Figure 12: Apprentice granddaughter of 85-year-old Catalina "Talin" Ablog weaving on her own loom at home in Jan 2019)

The Mindoro community visited demonstrated a highly proficient level weaving work and commercial potential due to quality, range of colours, scales and patterns observed. The weavers work in pairs with one weaver was at the back of the loom switching the shafts, the other main weaver was at the front of the loom producing the cloth.



(Figure 13: Mindoro weavers working in a pair in Jan 2019)

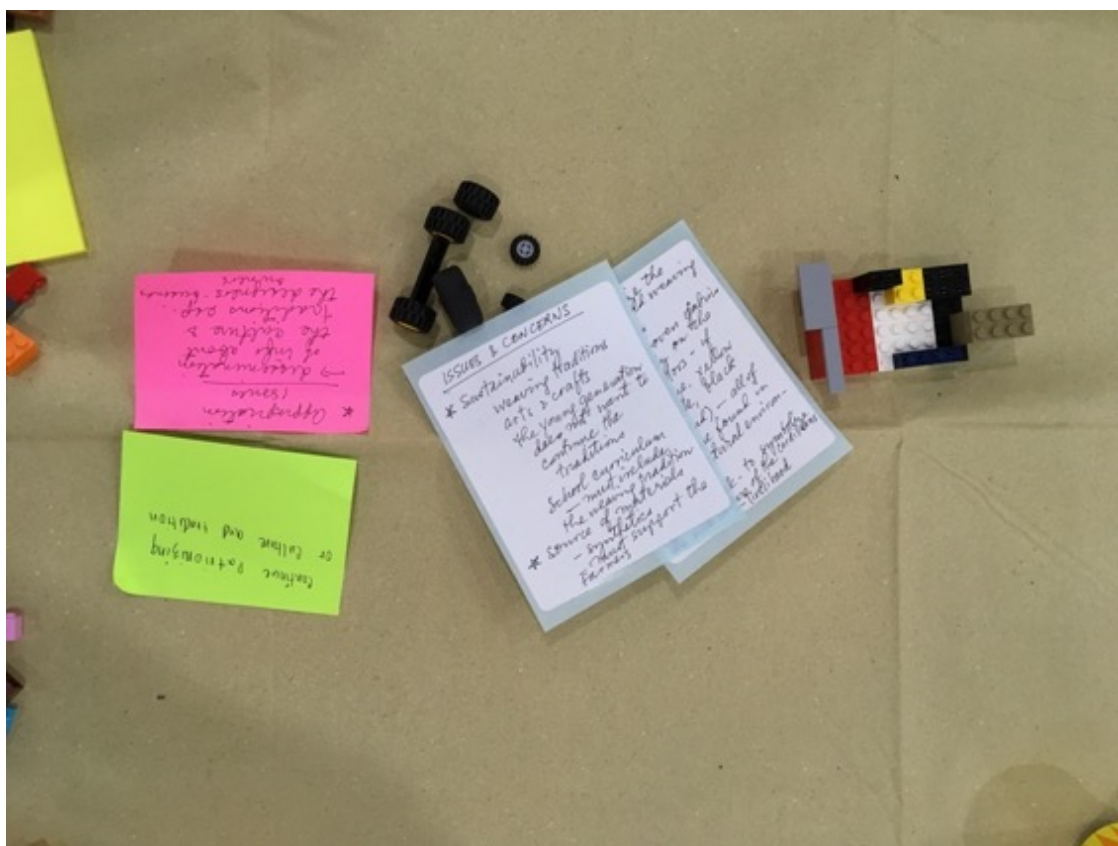
The level of tacit knowledge and skill observed in the Mindoro weave workshop is notable in comparison to other site visits. The environment of this workshop was a concern, in particular the proximity to the sea and the visibility of an open drain running through the workshop/home. The team reflected that the organization and capability of these weavers is not matched to their material circumstances and we asked within such circumstances the benefit digitization can play here? Two apprentice weavers took the opportunity to travel with the research team in their van to attend the *Learning Tool Kit Workshop* in Baguio where they were captivated by the methods introduced.

3.5 *Learning Tool Kit Development Workshop* at The University of Philippines in Baguio.



(Figure 14: The *Learning Tool Kit Workshop* at University of Philippines in Baguio held 19th January 2019)

The *Learning Tool Kit Development Workshop* at The University of Philippines in Baguio was attended by thirty-five participants from the Cordillera, academics and textile stakeholders. The methods used in preparing for the *Learning Tool Kit Development Workshop* reflected a pedagogic process to most effectively meet the project aims and collect the data required. A method for the multi-lingual multi stakeholder workshop was sought which enabled inclusive participation. A Lego® Visualisation method (Lego®, 2015; Blair and Rillo, 2016) met the aims of the workshop because visualisation enables reflection and language to develop through the description of models and objects made. It has been evidenced that objects can be used to visualise concepts and thoughts as they create a reflective space between a person, their thoughts and their discourses (Gauntlett, 2011; Kelly, 2017;).



(Figure 15: A Lego loom visualisation and reflection on weaver concerns, Jan 2019)

“significant symbols – words for the most part but also gestures, drawings, musical sounds, mechanical devices... anything that is disengaged from its mere actuality and used to impose meaning upon experience” (Geertz 1973, p45 in Crotty 1998 p53)

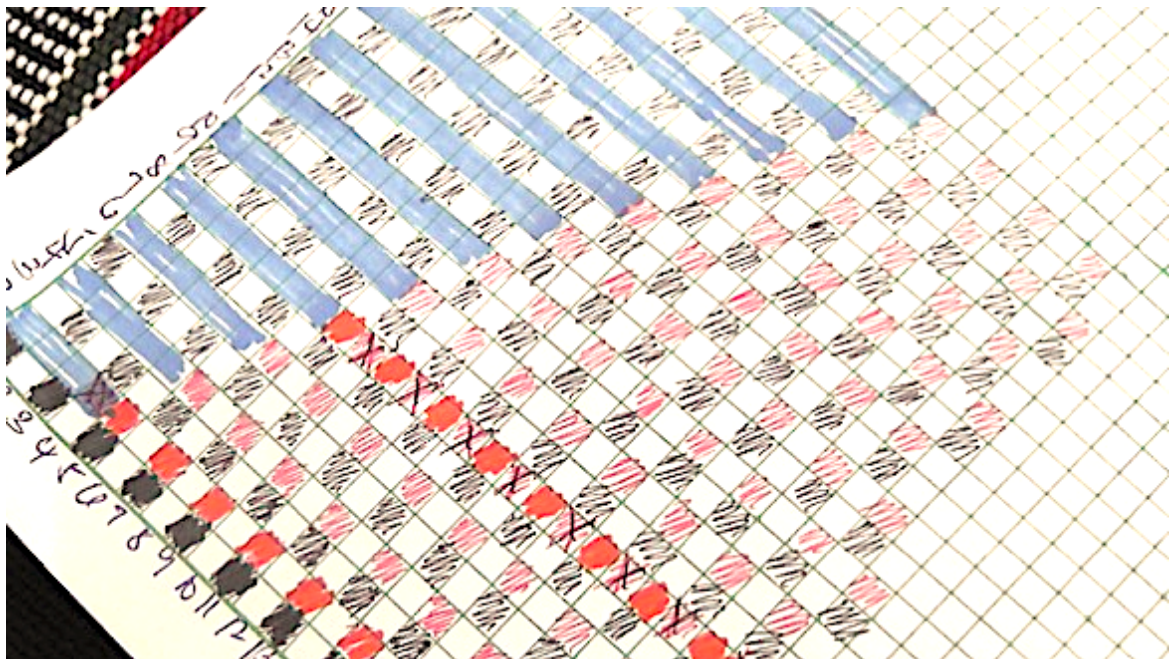
The effects of the Lego® method are that simple questions can be used to generate meaningful qualitative data. The method was chosen to replicate how oral teaching and learning works by supporting the discourse to evolve and for this process to be evidenced as a group experience. A set of simple questions were posed under three headings: Place, Knowledge and Concerns.

“Use the Lego to describe a place which is yours... tell us something only you know about Cordillera Weaving Tradition... what most concerns you about the preservation of Cordillera Weaving Tradition?”

As part of the *Learning Tool Kit Workshop*, participants were also taught to draft their weaving via a deconstruction of the weave structures and this was a first-time learning experience for all participants who expressed their revelation via the closing workshop plenary at being taught something new. Drafting is the Threshold Concept (Meyer and Land 2003, 2005) required to enable digital weaving to take place because it translates woven cloth into a binary language. By confronting their practices through the Lego® method and by learning the practice of drafting, the weavers reached a new position where new seeds for the understanding of their weaving tradition were sown.

4 **Exploration/ Initial findings:**

- The oral tradition requires someone to receive the learning and teaching and accurately and to remember this knowledge at a future date. If there is no listener/relater then the knowledge ceases to exist.
- The oral tradition is geographically defined (within the examples given) but can be exported to other settings e.g. other communities or learning spaces using digital media/phones as seen in use within communities and at the workshop.
- The oral tradition places a burden/responsibility/stewardship on families and communities to maintain and transfer knowledge, when its use both economically and socially may not be to the immediate or future benefit of individuals and communities involved.
- The economic benefits gained via the external preservation of the tradition via digitization may not be passed back to the community.
- The oral tradition benefits where learning is situated in a particular environment which recognises the social relationship between Master and apprentice or within Cordilleran societies from grandmother to daughter or grandchild. (Lave and Wenger 1991)
- The oral tradition results in the work evolving and being autonomously owned by the community that creates it, giving status to the weavers as stewards of this knowledge.
- The teaching of weave Drafting methods may encourage a sustainable weave learning framework to evolve.



(Figure 16: A weave draft created during Learning Tool Kit Workshop, Jan 2019)

The findings from the CSTFW project have informed the development of a *Learning Tool Kit* which comprises a range of resources which are formed by four practice actions:

Active Practice Actions:

- 1 Weaving learning can be made more efficient through the use of small portable sample looms, because they encourage **independent, quick, low resource**, creative weave learning to take place in a **variety of settings**.
- 2 Small sample looms enable learning to develop in a **constructed manner** by way of a spiral of knowledge development where learning leads to learning development in a progressive pattern.
- 3 Within the oral tradition apprentices become masters and then masters teach. The cycle is regenerated in each generation, but this is a slow process. Therefore, the use of **small sample looms** encourages independent weave learning beyond the traditional learning environment to a practice-led model where apprentices can learn independently and experientially as well as by instruction.
- 4 A **family-based system** where children as well as apprentices are encouraged to learn to weave in the home with their family. This play led learning using child led patterns could also be linked to Philippine K-12 school curriculum.

Sustainable Practice Actions:

- 1 Develop K-12 weave curriculum from the perspective of a future facing paradigm to **equip children and students with knowledge and skills to develop their heritage**. The key idea is to develop a child centred weaving curriculum, to build onto the resources that are within children, capturing what is there in the communities to start as a seedbed to grow. Starting with the youngest children to enable weave learning to be embedded from a young age. Methods would include storytelling and cultural narrative development.
- 2 Develop Higher Education weave curriculum to align with global textile education via **joint validations and transnational initiatives and exchanges**.

Innovative practice actions:

- 1 Introduce **weave drafting and design** via weave development into the **schools & HE curriculum**. Tools for drafting could be provided with workshop support (both via education routes and online platforms).
- 2 Link weave drafting and design to the CordiTex project hub at the Museum to enable weavers to participate in **advanced weave development**. Enabling the journey from drafting, weaving and **digital translation** to be made possible. Enable weavers to engage with design and craft practice beyond their region to increase the overall level of practice based knowledge and understanding. Guild or anxiety around practice development must be challenged by the benefits the sustainability of the Cordillera

weaving practice will bring.

- 3 Create a **living Cordillera weave library** and research hub. Learning resources would be for weavers to use for free and easily accessible potentially within the University of Philippines, Baguio.

Networked Practice Actions:

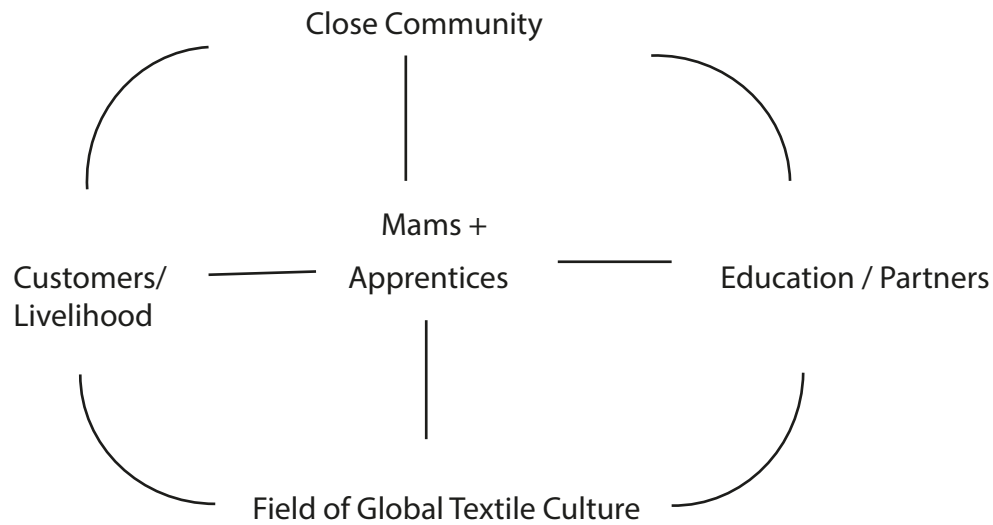
- 1 A **network of weavers across the Cordillera** is required to both enable knowledge, resources and economic opportunities to be shared. Enable opportunities for weavers to exhibit and share their work beyond their community.
- 2 Develop a professional practice community of practice for weaving groups or individuals online or via workshops.
- 3 Create a supportive co-operative or community centre for weave education. This centre could form a hub for communication, training, opportunity development and sale of work. The centre could also link up with other programmes which are emerging to support the indigenous weave tradition including yarn resource and raw material supply and development organisations and climate change based support agencies.

5 Conclusion

The CSTFW project captured the voices of the elderly 'Mams'; their young apprentices; customers; educators and the field of global textile culture which includes the Crafting Futures British Council Project audience. The mams and apprentices are being held in place by their tradition. What these women are saying is audible only in the echo chamber created by the oral tradition and the systems which support it.



(Figure 17: 'Mam' Master weaver speaking during the reflective plenary at the Learning Tool Kit Workshop, Jan 2019)



(Figure 18: Diagram to illustrate the oral tradition echo chamber, R Kelly 2019)

The pressure upon the Cordilleran weavers is profound because they are working to meet the needs of all the different agencies they are connected to. The communities also face the real demise of their culture and tradition. The weavers therefore were brave in being able to articulate and find a voice within the workshops and visits undertaken for the project and their voices spoke with validity and agency:

“Weaving is based in or near the home and that being at home or with their family and community is an important part of the weaving experience....

The value of weaving as a source of income is vital now that typhoons are occurring across all seasons, making work in the rice fields less dependable and more dangerous”.

(Reflections taken from the plenary of the Learning Tool Kit Workshop UoP Baguio 2019).



(Figure 19: A selection of participants from the Learning Tool Kit Workshop and project team, Jan 2019)

What was observed by this project was an ideal of weaving practice which places the women weavers at the centre of their communities and supports the sustainability of indigenous cultures and their land. The patterns of the Cordillera only take on meaning when they are spoken or woven. The woven cloths of the Cordillera become a language of weaving which enables an eternal conversation to take place between the community ancestors and the current stewards of this unique tradition. The Cordilleran weavers know and understand their world through the practice of weaving and the peace of work which the oral tradition of teaching between master's and apprentices creates, is a richness this culture and society own.

Therefore, the introduction of the digitization process, if placed directly into the hands of the weavers via a sustainable learning framework, could support a new oral tradition and sustainable weaving future for the Cordillera.

6 References

- Albers, A., Weber, N. F., & Cirauqui, M. (2017). *On Weaving: New Expanded Edition*. Princeton University Press.
- Adorno, T. (1973) *The Jargon of Authenticity*. London: Routledge & Kegan Paul Ltd.
- Blair, S., & Rillo, M. (2016) *Serious Work: How to facilitate meetings and workshops using Lego® Serious Play™ Method*. Promeet.
- Britt, H., & Shaw, A. (2014). *Transitioning between Industry and Education: The Centre for Advanced Textiles (CAT) Case Studies in Digital Textile Printing*.
- Buruma, A. (2007). The library as muse: using Liberty's textile archive 1. *Art Libraries Journal*, 32(3), 32-35.
- Cross, N.; (2011) *Design thinking: understanding how designers think and work*. Oxford, Berg.

- CordiTex (2018) Executive Summary. University of Philippines, Baguio City.
- CordiTex (2018) Study Brochure. University of Philippines, Baguio City
- Gauntlett, D. (2011). Making is connecting: The social meaning of creativity, from DIY and knitting to YouTube and web 2.0. Cambridge: Polity.
- Glover, D & Stone, G.D.; (2018) Heirloom rice in Ifugao: an 'anti-commodity' in the process of commodification, *The Journal of Peasant Studies*, 45:4, 776 804, DOI: 10.1080/03066150.2017.1284062
- Holland, D., 2001. Identity and agency in cultural worlds. Harvard University Press.
- Kelly, R. (2017). Ikebana: a collaborative design pedagogy. *The Design Journal*, 20 (sup1), S1093-S1105.
- Lave, J.; Wenger, E.; (1991) *Situated Learning. Legitimate peripheral participation*, Cambridge: University of Cambridge Press
- Lee, A. & Poynton, C., (2000) *Culture & Text*. Rowman & Littlefield, London.
- Lego® www.lego.com/en-us/seriousplay/trademark-guidelines
- Maslow, A.; (1943) accessed <https://www.learning-theories.com/maslows-hierarchy-of-needs.html>
- Meyer, J.H.F. & Land, R., (2003) 'Threshold concepts and troublesome knowledge (1): Linkages to ways of thinking and practicing within the disciplines. Improving Student Learning – Ten Years On. C. Rust (Ed), OCSLD, Oxford.
- Meyer, J.H.F. & Land, R., (2005) 'Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning'. *R. High Educ* 49: 373. doi:10.1007/s10734-004-6779-5
- NESTA Theory of Change method (accessed via <https://www.nesta.org.uk/toolkit/theory-change/>)
- Rosaldo, R. 1980. Ilongot headhunting 1883–1974. A study in society and history. Stanford, CA, USA: Stanford University Press cited in Glover, D & Stone, G.D.; (2018)
- Sanchez, A.; (1990) The Textile Industry in the Philippines and Thailand: A comparison. *Journal of Philippine Development*. No 30. Vol XVII, No 1. 1990. Accessed: <https://pdfs.semanticscholar.org/ebf7/ef18af2782a55949e7da6d727b37ff5a77d8.pdf>
- Star, S.L. & Griesemer, J.M., (1989) 'Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39' *Social Studies of Science* Vol. 19, No. 3 (Aug., 1989), pp. 387-420
- Tolentino, JR. D.; (2018) Feasts of Merit: wealth, status and feasting in Luzon Cordillera. Museum Kordilera, University of Philippines, Baguio City.

About the Authors:

Rachel Kelly: Professional and academic practice explores site-specific maker practices and sustainable education practice. Rachel has developed her research within interdisciplinary pedagogy and textile practice and has been published within *The Design Journal* and at international conferences including The European Design Academy Conference in Rome 2017 and The Canadian Craft Biennale 2017.

Dr Michelle Stephens: Current research explores the use of generative programming as a design tool in reanimating historical textile archives for woven textile design. Stephens's doctoral research entitled: 'Coded Cloth: How a generative digital design process for jacquard weave design can reanimate historical pattern archives' demonstrates the link between design and making.

Acknowledgement: The authors would like to thank the project partners from CordiTex, in particular Professor Analyn Salvador-Amores and the Chancellor of the University of Philippines, Baguio Dr Raymundo Rovillos. The project was initiated by Professor Alice Kettle to whom we are indebted for her support. We thank the participants in the field the weavers and stakeholders who attended the workshop in January 2019 and who kindly offered their models, reflections and insights which have enriched this research and paper. The project was the result of a Crafts Council & British Council Crafting Futures Grant and we thank Kendall Robbins from the British Council for her support throughout the project. Thanks is also given to Martyn Evans, Kristina Niedderer, Annie Shaw and Joe McCullagh at Manchester School of Art who have supported this research and paper possible.