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The Voices of the Cordillera: Digitising an Oral Tradition.

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Paper to be presented at The AHRC Design Research for Change Symposium at The Design Museum Wednesday 11 and Thursday 12 December 2019.

<https://www.designresearchforchange.co.uk/design-research-for-change-2019-symposium-papers-authors/>

Introduction

Under the remit of the UN Global Challenges Sustainable Goal 4, it must be understood that the capital value of knowledge preservation needs to be elevated by the economic benefits of formal education and the ongoing and often lifelong socio-economic impact it creates. The development and support of ethnolinguistic weaving practice may enable real-world benefits for Philippine society, culture, the environment and the economy; it may address global challenges of diminishing craft skill bases and knowledge and it may encourage an education ecosystem which challenges dominant craft and design education structures...

It has been evidenced that while the Cordilleran weaving tradition has the status of National Heritage within the Philippines, the numbers of community weavers able to practice is dwindling. A 2019 British Council & Crafts Council / Crafting Futures grant project enabled a collaboration between the Philippines based CordiTex project and Manchester School of Art to support the future digitization of indigenous weaving tradition within the Cordillera region of the Northern Philippines entitled: Creating a Sustainable Textile Future for Women via the Digitization of Cordillera Weaving Tradition (CSTFW) project. This project developed a Learning Framework and Toolkit to support the preservation of an oral based weaving tradition and to develop interventions for practice and knowledge based change. The project raises the voice of oral craft traditions and presents a heteroglossia, defined by Mikhail Bakhtin (1895 – 1975) to describe the relationships between different voices which can be heard within authored works such as hand woven textiles. The CSTFW project is considering the structures and systems from an educational and social standpoint to understand the perspectives for change this project identifies. Our rationale was to listen, observe and consider the research context and its challenges, in order to be able to respond with effective and useful strategies for support. We asked if the weaving tradition of the Cordillera is to transform and change from the problems it faces, what impact might the shift from of an oral to a digital tradition create?

We became a part of the CordiTex project in their second year out of three years funding and we brought Crafting Futures based research questions from our project

fundlers. The British Council Crafting Futures project asks, *How can craft generate economic opportunities and enhance livelihoods for women?* and, *how can the global craft sector address the declining youth engagement in the practice as well as the growing intergenerational divide?* These questions sit beyond the CordiTex project aims and part of our work in the collaboration, has been to consolidate our differing research destinations and aims.

Research Context

In the Cordillera region a rich tradition of weaving can be traced back through time for centuries. Cordillera weaving occupies a niche, that is cultural, functional, and which represents the artistry of ethnolinguistic communities in the northern Luzon geographic region. The major groups in the region include the Ifugao, Kalinga, Tinguian, Kankana-ey, Apayao and Ibaloy, each presenting unique histories, rituals, language and weaving styles. The weaving techniques across the whole Cordillera region and communities is represented by a weaving design process and culture which is underpinned by distinct religious, socio-political and mathematical values. The process of weaving is often taught from grandparent to grandchild and features a meditative process of counting from memory which weavers learn from a young age. The uptake of weaving amongst younger women today and the knowledge of weaving techniques, pattern structures and traditions are diminishing due to a range of socio-political and economic factors. Weaving knowledge is not held in a written form but is passed on via an oral tradition, where the holders of this knowledge are mainly elderly women 'Master Weavers'. 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).

Project Approach

The groups of weavers from the Cordillera are identified by their ethnolinguistic languages which define their cultures and represent identities specific to place, ritual,

beliefs and work. The Cordillera ethnolinguistic groups were traditionally “a society made up of small, dispersed, rivalrous groups, with a reputation for wildness (e.g. headhunting)” (Rosaldo 1980). The difference between the knowledge systems, culture, and material knowledge held within the Cordillera communities and the knowledge we hold as research practitioners is distinct. The value of the weaving community languages and voices is a richness we as western contemporary educators find hard to improve upon.

In terms of approaching data collection we employed phenomenological and ethnographic methods including field research and *deep hanging out* (Geertz 1998). Such approaches meant that we were located in the research context where we could listen, look, feel and remember rather than walk around with a notebook or camera. We were fortunate to have a photographer with us during our first field visit (Arnold Salvador-Amores) and his photographs tell a visual story of the project. Amores captured what we couldn't always see and our reflections on the data he collected via the photographs have supported us to figure the range of practitioner identities and voices we encountered (Holland; Lachicotte; Skinner & Cain 1998)

This project held a mirror up to us as researchers, educators and women and we the project team of Rachel Kelly and Dr Michelle Stephens maintained an identity as textile practitioners and weavers rather than researcher outsiders (Walmsley 2018). A Design Thinking Cycle was employed post-field visit, as an evaluation methodology to move the research from *understanding to exploration and materialization* (Cross 2011). A Theory of Change model (Nesta 2018) was the backbone of our methodology and we utilised our model to inform the project research questions, aims and outcomes. The Theory of Change framework was key to embedding a consideration of the wider landscape of change in which this project is located.



PROBLEM DEFINITION

Define the problem by exploring underlying factors

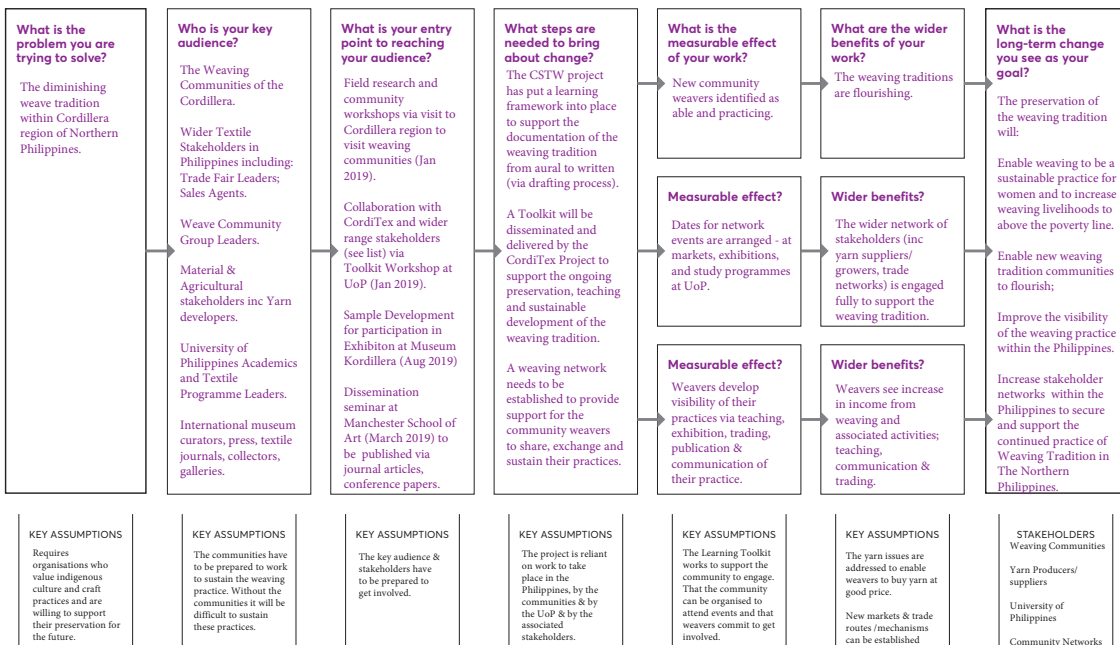
<p>What is the key issue you are trying to address and why is it important?</p> <p>Loss of cultural weave heritage within Cordillera Region in Northern Philippines via a:</p> <ul style="list-style-type: none"> -Diminishing weaving tradition within indigenous communities with low interest among young members of community to become weavers. -Textiles exist within museum collections, but the weave knowledge has not been written down by master weavers. - Therefore the community weavers who are elderly and still weaving are the last people to pass on their knowledge. Numbers are very low and the weave traditions are now in a critical state. 	<p>Who is it a problem for?</p> <p>It is a problem for the future of global craft weaving tradition and cultures.</p> <p>It is a problem for the women of the indigenous communities, because weaving has been a good source of income and livelihood for the predominantly female weaving communities within this area of Northern Philippines.</p> <p>It is a problem for the culture of the Philippines and the preservation of indigenous cultures which belong to the Cordillera region of Northern Luzon Region.</p>	<p>What social/cultural factors shape this problem?</p> <p>Climate Change and the impact of typhoons within the Philippines and across the world. The increase of volatile weather conditions places a concern upon rice production as reliable income source. Weaving is a viable alternative methods of income generation in particular for women and such alternatives are necessary for Northern Luzon Regional communities.</p> <p>The low uptake of Indigenous History Curriculum within Philippine Schools has limited formal learning which underpins a nationwide consciousness around the indigenous history of the Philippines.</p> <p>Inaccessibility of affordable yarns, in particular Philippine Cotton which results in high costs for weavers.</p> <p>Lack of weaving support networks.</p> <p>Lack of routes to market for sale of weaving.</p> <p>Lack of teaching within Higher Education to support maintenance of Philippine weaving traditions.</p>	<p>What evidence do you have that this is worth the investment?</p> <p>Data acquired via field research and via CordiTex Project (CSTW visit Jan 2019) which evidences the unique weave traditions across the Cordillera region including mathematical patterning and natural dyeing.</p> <p>The part the weave cultures play within the global contexts of Crafting Futures; Sustainable Textile Practices;</p> <p>Data acquired via Toolkit Workshop where commentaries on the value of weaving to the communities were captured.</p> <p>CordiTex project has invested £500,000 on Digital loom technology to document the weaving patterns for preservation and future development.</p> <p>University of Philippines are exploring resources for the development of HE study to support the development of weaving tradition.</p> <p>UNESCO World Heritage Status has been awarded to Ifugao Rice Terraces and this is indicative of the value which should be placed upon the culture of the Cordillera.</p>	<p>Can you think of this problem in a different way? Can you reframe it?</p> <p>There is a diminishing weave tradition within Cordillera region.</p> <p>The tradition is worth preserving on the basis that women can weave and make a living (in all weathers) to sustain their families and communities.</p> <p>The loss of the weaving tradition will represent the loss of the communities and culture of the Cordillera.</p> <p>Areas of the Cordillera have been awarded UNESCO World Heritage Status and the weaving tradition sits beside the rice growing, rituals, feasts and festivals unique to the Cordillera Region.</p> <p>The weave tradition and culture of weaving is worth preserving and the development of learning frameworks to support a sustainable future for the weave tradition is worth pursuing.</p>
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INSPIRED BY: Julier J, Kimbell L, (2012) Problem Definition, p30, The Social Design Methods Menu



THEORY OF CHANGE

Define your goals and how you will achieve them



INSPIRED BY: Nesta (2011) Theory of Change

(Figures 1 & 2: Nesta Problem definition & Theory of Change plans devised by Kelly, 2018)

Research Part 1: Field visits to five Cordilleran weaving communities in Kiangen, Abra, Manabo, Santiago and Mindoro.

While the CordiTex project is looking to preserve the Cordillera weaving tradition, our research focused upon two communities who are considered in most critical need of support due to the near decline of their tradition. The communities from the Abra delta area near to Llocos Sur and the South China Sea are described as having Ibaloy and Tinguian heritage (Tolentino 2018). Both groups weave textiles such as the *Binakul* which was a cloth originally used to call upon the wind gods to warn off dangerous spirits.



(Figure 3; *Binakul* Fabric. Credit CordiTex Archive)

Groups such as those who live in Manabo & Illocos are geographically dispersed communities of Tinguian heritage having had to move due to deforestation and problems faced as a result of environmental problems developing in rice growing (Gabattiss 2018; Glover & Stone 2018). The groups have an identity which is demonstrated by their ethnolinguistic language and the representations of their language by their textiles. If their textiles disappear, a large part of their identity will also be diminished.

The Manabo community from the Abra Delta.

The Manabo community has a status and history that places it in a superior position in the hierarchy of weaver communities and culture in the Cordillera, due to the complex

weaving patterns and fine cotton yarns used. Paradoxically, it is now in the position of being the community most at risk from the weaving tradition dying out and they cite many reasons, but the inaccessibility of Philippine yarns which are sold for export before they are even planted is making it too costly for them to weave. There is activism within the Philippines seeking to remedy the inaccessibility of Philippine Cotton and the UNESCO heritage status of the rice terraces is going some way to support the preservation of Philippine cotton growing (Glover & Stone 2018).

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.



(Figure 4: Manabo Village Garage which houses last remaining community looms. Credit Amores 2019)

The Manabo 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, die. Our project partner had arranged during our visit to collect a loom belonging to the community to take back to the Museum Kordillera due to lack of space in the garage space and because it was unlikely ever to be used again.



(Figure 5: Manabo Community Weavers. Credit Amores 2019)

There was a sense of despair that the young of the community were either not prepared nor interested in learning to weave. With this group in particular, the potential of weaving as a good source of income could be developed and our project had been designed with this type of community in mind. Our rationale as researchers was to scrutinise what we saw and understood to be true, and we have been mindful not to over romanticise the problem, but to seek via our evidence if positive outcomes for the preservation of the weaving tradition may emerge.



(Figure 6: Dr Michelle Stephens mobile Phone. Credit Amores 2019)

A shift in the tone of the visit came when researcher Stephens showed examples of her digital weaving work to the community on her mobile phone. The group became mesmerised by the images and the conversation opened up. The Manabo weavers, in a

sense decided to listen to us because they were interested in talking about weaving rather than talking about the problems in their community. The exchange with the phone opened up a creative space where we were able to introduce our project and to demonstrate hand and digital weave drafting methods. Explaining that they could write down their designs and that they could be developed in many ways as a result.



(Figure 7: Manabo Community Weavers look at mobile phone weaving images. Credit Amores 2019)



(Figure 8: Manabo Community Weavers learn to draft their weaving. Credit Amores 2019)

Drafting is the notational language required for the translation of woven fabric into a binary design code which will enable weaving to be developed, patterns to be preserved and for the draft to be used as a teaching tool.

“...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).

The weavers saw the potential to enable the expression of their ideas via the drafting process and each weaver became fully engaged in what we were showing them. The Master Weaver worked with quick marks and the other weavers worked slowly and precisely. The drafting process became an expression of their signatures, just as they are the writers of their cloth. 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. Drafting is the written notation of woven structures, so is a design process. The binary language of drafting is universal and this first writing of a draft was the first step away from the oral tradition. For these women it was the first time they had written their designs down.

It is implied by the oral tradition that the draft process creates a boundary object with which to mediate between the tradition and the present (Star & Griesemer 1989). The drafting process in this context became a mediating practice and the workshop which took place in the small garage space captured a sense of future potential which the Learning Tool Kit will hopefully enable within contexts such as the Manabo.



(Figure 9: Manabo Community Weavers working at outside table. Credit Amores 2019)

The concerns of the 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 needs to be

communicated better to the non-weaving community members and there was a sense that the weaving might be a nuisance to other activities. The contrast between the lack of space in the garage with the 'packed-in' looms with the freedom of space the impromptu workshop and draft process created 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: Manabo Community Weavers working at outside table. Credit Amores 2019)

The Sabangan Weavers Association in Santiago Ilocos Sur.



(Figure 10: Master Weaver Mam Talin. Credit Kelly 2019)

The Sabangan Weavers Association comprises three elderly women weavers and one granddaughter; Talin 85, Ibing 75 and Petra 79 and Shara 16. Within this visit we observed a rare apprentice pairing between grandmother Talin and granddaughter Shara, who practices sections of weaving on her grandmothers loom. We were also exposed to the affect climate change is having upon these communities directly and in the home of Talin which is very close to the South China Sea wall, she had lost sections of her roof in the December 2018 typhoons.



(Figure 11: Master weaver Mam Talin's typhoon damaged home. Credit Kelly 2019)



(Figure 12: Apprentice weaver. Credit Kelly 2019)

This community will hopefully benefit from our project in particular, via the development of the Learning Tool Kit, which will support apprentice learners to work with more independence via the introduction of portable weaving technology, access to a weavers network and weave learning hub. In the research reflections we have made since we undertook the first field visit, we have looked closer at the choices such women face in choosing weaving as a livelihood. We have used a range of perspectives and methodologies to understand how the development of a language-based understanding of their identity (Gadamer 2006) might better support the weaving women to maintain strength in their choices. We heard many stories of women who were master weavers who gave up and now walk the highways selling eggs. Shara, the apprentice Sabangan weaver was in school but has since January 2019 dropped out to look after her family.

To contrast with the despairing situation we were presented with, there were also high levels of actualizing/wellbeing (Maslow 1943) demonstrated by the elderly weavers in that they work independently, they are long living, active and they are Masters in their craft. The manner in which 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 and their exposure to environmental dangers such as typhoons and tsunamis, but wellbeing

comes from their independence and autonomy and from the act (or ritual) of weaving rather than the income they generate.

Being a weaver is the identity taken by these women and they demonstrate 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, costing measuring and business capability;
- Peace at work – one weaver described her loom as ‘her office’.

The undertaking of the field visits such as the one to the Sabangan community raises a concern that sympathetic researcher lenses can often be adopted when complex and challenging research experiences are encountered. We experienced confusion as to how we were responding to these women and our responses were polarized between positive and negative.



(Figure 13: Talin’s dry garden appeared like a paradise in contrast to her typhoon ravaged home. Credit Kelly Jan 2019)

Discourse Analysis and in particular discourse analysis which uses a Foucauldian process of text reversal (Lee & Poynton 2000) can be used as a method to help reveal an alternative to the sympathetic bias which can arise from projects such as ours. The visit to meet the elderly Sabangan women living in extreme poverty could affect our

bias and understanding. The results of a reversal analysis (see figure 14) using a section of text highlighted above creates a picture which reveals an alternative perspective of the structures which are implicated in the enabling of such a despairing position for the Cordillera weavers.

~~Concerns for the Sabangan women are their very low income. (The Sabangan women work independently and survive on what they earn from their weaving) Wellbeing comes from the act or ritual of weaving rather than the income generated. (Weaving is an active practice, it is physical, repetitive and time consuming). Being a weaver is the identity taken by these women and they demonstrated this via: (Weaving is one of a range of work types available to these women, alternatives include egg selling, prostitution and factory work)~~ demonstrated via:

- ~~Their independence;~~ **Their Dependence;**
- ~~Their work from home;~~ **Their home is their place of work;**
- ~~Pride via photographs of work in the home.~~ **There are only pictures of their work;**
- ~~Participation in education projects;~~ **It is useful for education projects to use examples such as these women as data;**
- ~~Family support structure and the connectiveness across generations;~~ **Ties that bind;**
- ~~Direct selling;~~ **No one to support the sale of work;**

~~Peace at work — one weaver described her loom as 'her office'. Life is so challenging in terms of poverty that the sanctuary of work brings a sense of relief.~~

(Figure 14: Discourse analysis undertaken as part of understanding research process. Credit Kelly 2019)

The process of translating the text into an opposite version of the truth, enables a version of the project which can be used to better undertake a response to the research questions asked *How can craft generate economic opportunities and enhance livelihoods for women?* By opening up the picture of the context via a discourse analysis, conceptual spaces are created around which to think, research and potentially to design interventions and tools which can support and enable the weavers to change their situation.

Our visits to the communities enabled us to understand the context first hand and exposed our biases, challenging us to seek a method to see different perspectives. Due to our research and practitioner led figuring (Holland; Lachicotte; Skinner & Cain 1998), we were able to adapt and respond to the situations we were presented with. We started to identify more deeply with the women and began to understand the wider implications for our research.

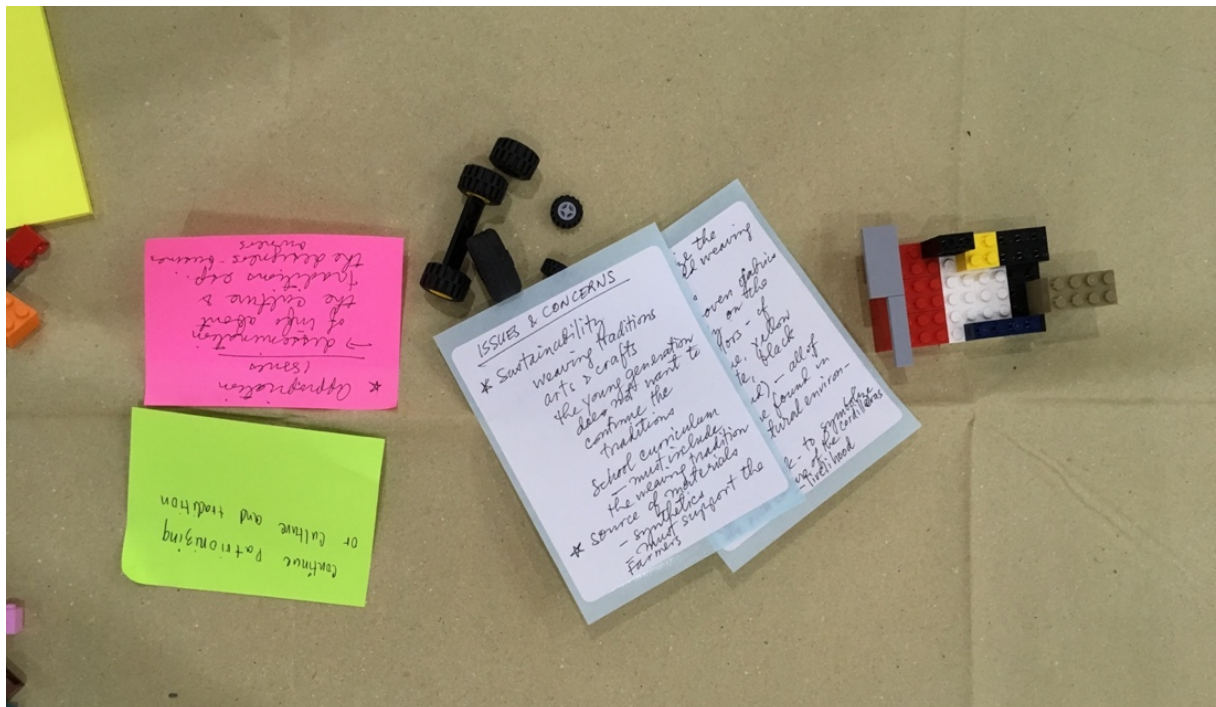
Part 2: A Learning Tool Kit Development Workshop held at The University of the Philippines in Baguio.

The Learning Tool Kit Development Workshop in Baguio was attended by Thirty-Five participants from The Northern Cordillera villages, academics and textile stakeholders. The methods used in preparing for the workshop reflected a process designed to most effectively meet the project aims and collect the data we required. A process for the multi-lingual multi stakeholder workshop was sought which enabled inclusive participation and a Lego® visualisation method (Lego® 2015; Blair and Rillo 2016) was used. Using Lego® we asked simple questions to generate meaningful qualitative data and the process replicated somewhat how oral teaching and learning works by supporting discourse to evolve and for the process to be captured via a shared group experience (Gauntlett 2011; Kelly 2017).

“...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)



(Figure 15: The Learning Tool Kit Workshop at University of Philippines in Baguio held 19th January. Credit Kelly 2019)



(Figure 16: A Lego loom visualisation and reflection on weaver concerns. Credit Amores Jan 2019)

We posed three simple questions:

1. "Describe a place which is yours..."
2. Tell us something only you know about Cordillera Weaving Tradition...
3. What most concerns you about the preservation of Cordillera Weaving Tradition?"

The community in the workshop revealed that they felt a pressure which is multi-layered where they are responsive to the range of voices from their past, present and from their children looking towards the future. The oral tradition supports all of the Cordilleran communities by way of the maintenance of their living culture. The practice of weaving has been an unstated support system for these communities and in particular the women within these communities, for such a long time that the value of weaving to sustain and maintain livelihoods, most likely reaches far beyond what is currently recognised.

Key reflections from weave Drafting workshop were:

- I. That weaving at home with the family and community is an important part of the weaving experience for the women. They value the peace their practices bring.
- II. The value of weaving as a source of income now that typhoons are occurring across all seasons is vital. The typhoons make work in the rice

fields less dependable and more dangerous and women can weave in all weathers so is seen as a positive aspect for the maintenance of both community and livelihoods. Having weaving resources which can support teaching and learning in the community, was seen as a positive idea.

III. The autonomy of weaving as an identity, for the women was crucial, and while all the weavers we met were living below the poverty line there were high actualizing outcomes for the women being able to work independently. NB: This is something which our ongoing research is looking into in more depth.

Participants as part of the *Learning Tool Kit Workshop*, were also taught to draft their weaving via a stage by stage demonstration which used old Cordilleran fabrics from the CordiTex archive during which, again we learned that the community weavers are completely adept at understanding weave drafting even though it was a first-time learning experience for all. Participants expressed their revelations in the closing workshop plenary at being taught a new weave language. 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 stepping through a knowledge portal during the workshop, a seed for change was sown.



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



(Figure 18: Weavers visit the Feasts and Rituals Exhibition at Museum Kordillera at UoP Baguio. Credit Amores, Jan 2019).



(Figures 19: Workshop participants visit the CordiTex project archive at Museum Kordillera in Baguio. Credit Amores, Jan 2019).



(Figure 20: Workshop participants visit the CordiTex project archive at Museum Kordillera in Baguio. Credit Amores, Jan 2019).

The final part of the Learning Toolkit workshop was a tour offered by the CordiTex team of their project archives at the Museum Kordillera. While the weavers were amused at coming face to face with the work of their ancestors, there was a palpable sense of concern, or it could have been awe, when the weavers viewed the carefully preserved fabrics. The past and present collided at this moment and there was a huge contrast between the circumstances of the weavers and the high-tech air-controlled archive. The weavers returned, literally chilled, from the archive environment and we can only reflect that the experience was deeply affecting for the participants.



(Figure 21: Workshop participants visit the CordiTex project archive at Museum Kordillera in Baguio. Credit Amores, Jan 2019).

Discussion

The story of our project is that there is a diminishing weaving tradition within the Cordillera which is evidenced by the low interest among young members of the communities to become weavers. Elderly community weavers are and will be the last generation to pass on their knowledge in an oral tradition. Weaving knowledge has maintained the ethnolinguistic oral tradition where master weavers teach apprentices, but the weaving tradition is now in a critical state as the elderly weavers are dying.

The value of Cordillera weaving has been recognised by museums and by private collectors with cloths being documented, sold and collected globally. The CordiTex project aims to preserve Cordillera weave knowledge via the digital translation of the weave structures and by purchasing a specialized TC2 Digital Loom to use to translate the lost patterns. The *Museum Kordillera* will dedicate an exhibition in 2019 to the Cordillera weaving tradition, however, this preservation process is disconnected from the communities and weavers from which this culture of textiles has arisen.

Weaving has enabled trade and income for the predominantly female weaving communities within the Cordillera area of Northern Philippines for millennia. If weaving declines with the decline in culture (CordiTex 2018), a source of income and livelihood for women also declines. The Creating a Sustainable Textile Future for Women: Digitising Cordillera Weaving Tradition project aimed to address this. The weavers met via the project workshops and activities, expressed the paradise their work creates via the autonomy and sense of connection to their history, community and land their weaving provides. The weavers convinced us to support them to find methods to bring young women into weaving practice via a new learning system (Drafting), supported education, learning tools and apprenticeship.

The reflections of the weavers at the UoP *Learning Tool Kit* workshop and in the field and the small literature review undertaken so far, have enabled the identification of an emerging link between weaving practice and rice growing. The changes to rice growing as a main reliable income source for Northern Luzon Communities is changing (Glover & Stone, 2018) and weaving creates an opportunity within the changing climate as an enduring occupation which may in the future become more reliable than agricultural work. Climate change and the impact of typhoons within the Philippines is having a negative impact upon the rice growing eco-system and rice growing is under increased scrutiny as a possible contributor to climate change (Gabbattiss 2018).

The *Indigenous History Curriculum* within Philippine Schools (a K-12 level ages 3-12 years) has limited formal learning which aimed to underpin a nationwide consciousness around the ethnolinguistic history of the Philippines and in particular

an understanding of ethnolinguistic cultural traditional crafts. The inaccessibility of affordable yarns in particular Philippine cotton which is mostly exported, has resulted in higher baseline material costs for weavers. The lack of weaving support networks, lack of routes to market for sale of weaving and lack of teaching within Higher Education to support maintenance of Philippine weaving traditions, all contribute to the problem identified.

The centrality of weaving in the lives of the women of the Cordillera region must not be underestimated. Weaving and the weaving communities have protected, clothed, and celebrated this society and the endeavours of the Crafting Futures project to reinforce the central pillars of the Cordillera Weaving Tradition are commendable. However, if the position does not change then the outlook for the Cordilleran communities is depressing and for the women and their families and children, it is frightening and predictable. For the remaining communities who do not find or secure good work within their communities, there is the fearful move, to life in a city with its inherent risk of exploitation. Centuries of tradition, culture and an autonomous life that was a paradise, is in danger of disappearing. With this in mind we have developed a *Learning Tool Kit Action Plan* that we earnestly hope can assist in sustaining the weaving culture of the Cordillera.

Digitizing the Cordillera Weaving Tradition Project: 4 Action Strand Learning Tool Kit/2019

Developed by Rachel Kelly, Dr Michelle Stephens & The CordiTex Project Team at University of the Philippines, Baguio.

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>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>Young people bear a heavy weight of responsibility for their ancestors history, rituals and practices. Young weavers need to find their own weave languages to connect with the wider fields of design and craft.</p> <p>Creating hub or centre for weave education will support innovation and research.</p>	<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>Active Practice Actions:</p> <ol style="list-style-type: none"> 1. Weave learning can be made more efficient through the use of portable learning technology (in the first instance via small sample looms, but in time new innovations could be developed). <p>This action builds upon understanding and knowledge which exists within the communities (such as the portable backstrap loom) to enable independent, quick, low resource, weave learning to take place in a variety of settings.</p> <ol style="list-style-type: none"> 2. Within the oral tradition, apprentices become masters and then masters teach. The cycle is regenerated in each generation, but this is a slow process, where apprentices do not teach until they are masters. <p>Small sample looms enable learning to develop in a constructed spiral rather than circular form. A practice-led model, where learning leads to further learning development enables learners to become More Knowledgeable Others (Vygotsky 1978) so the process repeats, but in a more efficient and effective manner.</p>	<p>Networked Practice Actions:</p> <ol style="list-style-type: none"> 1. A Cordillera Weave Network is required to enable knowledge, resources and economic opportunities to be shared both within and beyond their community. 2. A professional practice development programme for groups or individuals online or as workshops would support practice beyond the traditional weaving system. 3. A co-operative hub or centre for weave education is needed. The centre could provide communication, opportunity development and enable routes for the sale of work. The centre could link beyond the weave tradition to include farming, yarn and fibre development, raw material supply and links to climate change based support agencies. 4. Family-based networks will expand as children gain their own voices and understandings of their culture and practices. Children will be encouraged to learn in the home with their family, within their community and via the development of the K-12 curriculum. 	<p>Innovative Practice Actions:</p> <ol style="list-style-type: none"> 1. The development of design tools and technology which will appeal to the young (via digital tools and portable loom technology), will support weave based craft and design learning both in the community and as a part of schools & HE curriculum. 2. Weave education would be central to the CordiTex project hub, to enable weavers to participate in advanced weave development (via TC2 Loom access) to develop innovations and the journey from drafting, weaving and digital translation to be made. 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. 	<p>Sustainable Practice Actions:</p> <ol style="list-style-type: none"> 1. Develop K-12 weave curriculum as a future facing education paradigm to enable children to develop knowledge and skills which build upon the heritage and resources that are within the communities. By facilitating a system in which the knowledge-based capital in the communities can grow, new seeded pedagogy, learning and innovation can emerge. Starting with the youngest children, weave learning will be a part of their education from a young age. 2. The weaving knowledge in the Cordillera resides within the communities. A bridge from Higher Education to the communities is needed to develop weave education via global textile conversations, new curriculum development, joint validations and transnational initiatives and exchanges.

Ref: Vygotsky, L.S; edited by Michael Cole...[et al] (1978) *Mind in society: The development of higher psychological processes*. Cambridge, Mass; London Harvard University Press.



(Figure 22: Learning Tool Kit Action Strands; Credit Kelly July 2019).

Digitizing the Cordillera Weaving Tradition Project: 4 Action Strand Learning Tool Kit/2019.

Developed by Rachel Kelly; Dr Michelle Stephens & The CordiTex Project Team at University of the Philippines, Baguio.

Active Practice Actions:

1. Weave learning can be made more efficient through the use of portable learning technology (in the first instance via small sample looms, but in time new innovations could be developed). This action builds upon understanding and knowledge which exists within the communities (such as the portable backstrap loom) to enable independent, quick, low resource, weave learning to take place in a variety of settings.
2. Within the oral tradition, apprentices become masters and then masters teach. The cycle is regenerated in each generation, but this is a slow process, where apprentices do not teach until they are masters. Small sample looms enable learning to develop in a constructed spiral rather than circular form. A practice-led model, where learning leads to further learning development enables learners to become *More Knowledgeable Others* (Vgotsky 1978) so the process repeats, but in a more efficient and effective manner.

Networked Practice Actions:

1. A Cordillera Weave Network is required to enable knowledge, resources and economic opportunities to be shared both within and beyond their community.
2. A professional practice development programme for groups or individuals online or as workshops would support practice beyond the traditional weaving system.
3. A co-operative hub or centre for weave education is needed. The centre could provide communication, opportunity development and enable routes for the sale of work. The centre could link beyond the weave tradition to include farming, yarn and fibre development, raw material supply and links to climate change based support agencies.
4. Family-based networks will expand as children gain their own voices and understandings of their culture and practices. Children will be encouraged to learn in the home with their family, within their community and via the development of the K-12 curriculum.

Innovative Practice Actions:

1. The development of design tools and technology which will appeal to the young (via digital tools and portable loom technology), will support weave based craft and design learning both in the community and as a part of schools & HE curriculum.

2. Weave education would be central to the CordiTex project hub, to enable weavers to participate in advanced weave development (via TC2 Loom access) to develop innovations and the journey from drafting, weaving and digital translation to be made.
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.

Sustainable Practice Actions:

1. Develop K-12 weave curriculum as a future facing education paradigm to enable children to develop knowledge and skills which build upon the heritage and resources that are within the communities. By facilitating a system in which the knowledge-based capital in the communities can grow, new seedbed pedagogy, learning and innovation can emerge. Starting with the youngest children, weave learning will be a part of their education from a young age.
2. The weaving knowledge in the Cordillera resides within the communities. A bridge from Higher Education to the communities is needed to develop weave education via global textile conversations, new curriculum development, joint validations and transnational initiatives and exchanges.



(Figure 23: Learning Tool Kit Workshop Participants; Credit Amores Jan 2019).

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