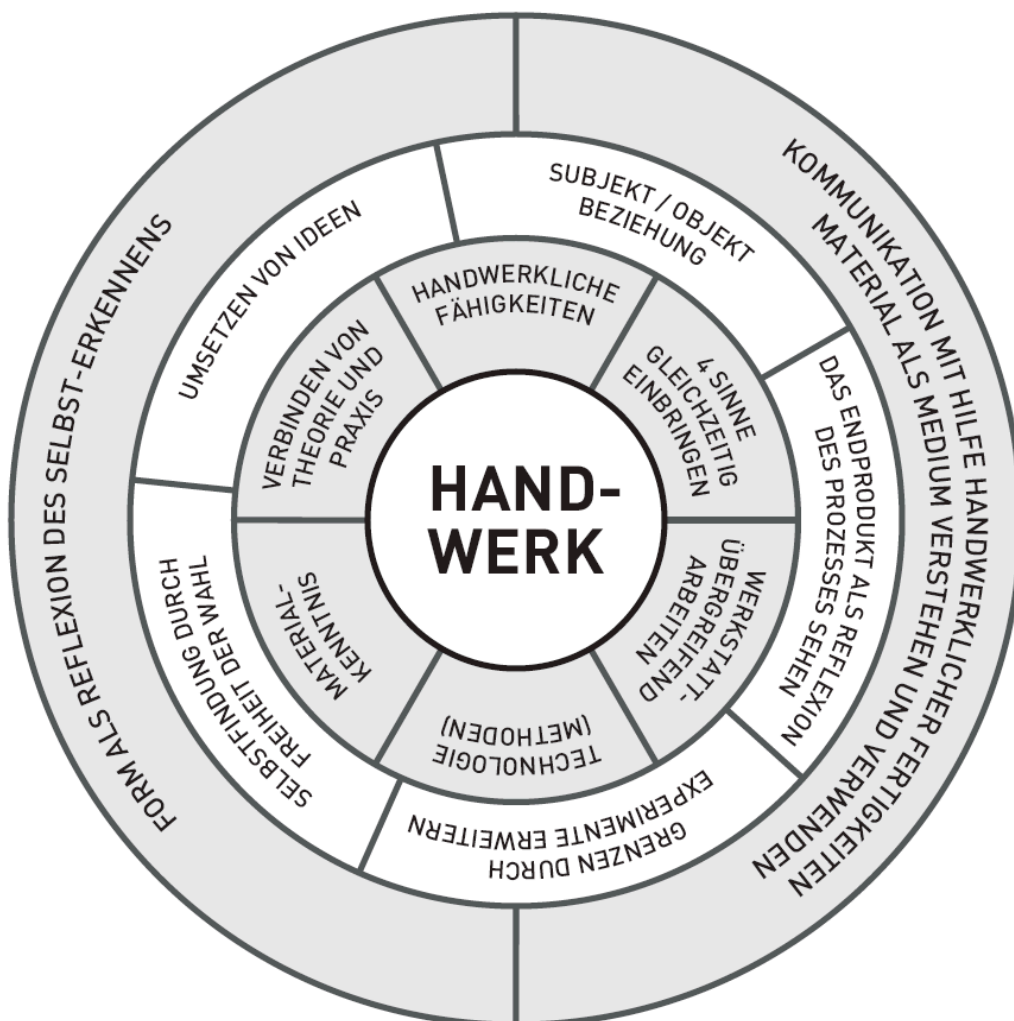


How Making Makes the Maker

A Living Archive

Visions for Educating the Future Stewards of an Ecologically Sound Environment

A research project proposal by Johnny Ragland BA, MSc



Written concept by Johnny Ragland, diagram concept by Bauhaus

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Abstract

The literature, later referenced in the text, shows that engaging in craftwork informs the participant about form, in general leading to design problem solving ability. This proposal looks at how the process of learning traditional craft skills within a creative craft workshop, which is equipped for working both traditionally and additionally using up-to-date commercial methods of production, has the potential to increase awareness of materials in their natural state and therefore matters of sustainability.

The methodology examines interplay between: 1) traditional way of working in conjunction with modern methods of production, 2) use of materials for the purpose of self-expression, and 3) reflection on a finished self-designed product, self-made both traditionally and with the use of modern machinery.

It qualitatively explores how a conscious link can be formed, in the process of making, between the materials used, and the source of those materials. The researcher uses a questionnaire method to elicit from participants, the following:

- Any heightened levels of interest in the source of materials used
- Any increased empathy towards matters relating to sustainability
- Any indication of desire to safeguard natural resources

The method includes creating an archive of individuals of craftspeople who live and have a 'lifetime' of experience working in craft in Austria. Aspects of the way in which these people work will be/have been in a traditional way. From this 'living archive', craftspeople will be asked to mentor participants within a one-day, two-day or three-day creative workshop, at an address in Austria.

The overriding objective is to investigate methods that could demonstrate the viability by which a continuation of traditional craft skills in education may result in an awareness of resources found in their natural state, and a desire to find alternative methods of material use, which could lead to an increased level of their preservation.

Keywords: Education, Craft and design, Natural resources; Sustainability

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Objectives

- To contribute to current knowledge relating to commercial benefits attached to using traditional craftspeople to mentor within a creative workshop
- To develop a replicable method which qualitatively determines craft derived awareness of natural resources through working with natural materials
- To develop a method which can derive meaningful information as to how learning traditional craft skills can contribute to knowledge of the local area in terms of local natural resources and their relevance to daily life
- To provide a rationale for re-evaluating the extent to which traditional craft skills should be taught in secondary schools, technical schools and other institutes involved in education
- To formulate information to those structuring curricula for students or pupils studying within institutes which have aspects of craft within their remit
- In respect of eliciting information from participants; to develop a useable tool for the processing of data from questionnaires

Partner cooperation/acknowledgements

This research investigates how traditional craft can be used as a base for strengthening awareness of natural resources local to the area in which these skills are learnt, and how the process of attaining this knowledge could later provide an increased ability in devising methods of designing a more sustainable material and product. Therefore, it structures arguments for introducing/retaining traditional craft instruction in schools, colleges and other institutes which offer courses pertaining to aspects of design.

The researcher asserts that the contributions of the organisations listed below will significantly increase the likelihood of success in the project. Listed below alphabetically are companies and other professional organisations and associations, most of which have already cooperated through their generous donation of time with the researcher on previous studies and the researcher hopes and predicts, will again cooperate with this study:

- Burg Friesach Errichtungs-GmbH
- Furnierwerk Merkscha GesmbH, Gratwein
- Steelcase Werndl AG, Rosenheim, Germany
- Team 7 GmbH, Ried im Innkreis

- Alun Watkins of the Furniture Industry Research Association, UK
- Cranfield University, UK
- De Montfort University, Leicester, UK
- FH Salzburg, Department of Design Product Management
- HTL, Mödling, Department of Wood Technology
- Slovak University of Technology, Bratislava
- The Centre for Furniture Craftmanship Rockport, Maine, USA
- University of Natural Resources and Life Sciences, Vienna (BOKU)

The philosophy behind this concept has additionally been aided through information available from, and observations made, during visits to the following:

- Appenzeller Volkskundemuseum (Weberei), Stein a.R., CH, nahe Dornbirn
- BOKU University
- Das Metallwerk, Tulln
- Die Kunst des Vergoldens, Schloss Belvedere (als Kinderuni 10 bis 14 gelaufen)
- Frischeis GmbH

- HTL Ferlach / Maschinenbau (Produktdesign)
- Hill Holt Wood, Lincoln, UK
- HTBL, Hallstatt
- HTL, Innsbruck
- Kaisersteinbruch, Burgenland
- Kartause Mauerbach
- Schmiedewerkstätten, Wirtschaftsförderungsinstitute
- Stübing Open-Air Museum
- Studio Beate von Harten, Wien / Gobelin, Tapiserie
- Textildruckmuseum, Hard
- Textilmuseum, Alte Fabrik, Weitra
- Werkstätten, Glasfachschule Kramsach
- Werkstätten, Keramikfachschule Stoob

Introduction summary

It is often remarked that the hand skills in use today reflect contemporary needs. Skills, it is said, have since time immemorial, died naturally as trends, fashions and desires change. However, since the advent of the Bauhaus movement (referred to later in the text) the speed at which most aspects of traditional crafts are being left in the past is unprecedented. For example, for hundreds of years the wheelwright made wheels from wood or, for thousands of years people carved mortise and tenon joints; neither of these is now commonly made by hand.

This study, through the living archive, researches areas of traditional craft, which may be considered a valuable by-product or transferable ability. Through workshops within a craft making environment, it uses a method of recording those who are skilled in practising traditional work. The rationale is that such a compilation may assist those constructing education curricula, for those young people who will be ultimately the ones deciding whether learning and practising aspects of traditional craft can be deemed vital in the future.

The research polemically looks at ways of reversing the generally accepted opinion that craft skills naturally follow the needs of society. Instead it looks at crafts skills as reasons for methods being established to motivate the learning and use of these skills today.

Designers, through their ingenuity and knowledge of the scope and limitations of materials, are charged with designing a 'sustainable' product which suits the ever-increasing number of users and has an ever-decreasing impact on the environment (Fiell and Fiell, 2006). This proposal looks at how traditional craftspeople pass on their skills, which ultimately leads to an awareness of the natural resources which the designer specifies when designing products for an ever-increasing population that is demanding an ever-decreasing impact on the environment.

Located at fixed premises in or in the area surrounding Vienna, creative craft workshops will be offered, which guide participants to work both traditionally and using modern methods of making. Aided by his knowledge of sustainability and experience in carpentry and joinery, product design, project management and teaching, the workshop leader/researcher will facilitate a replicable method for recording participant output within a mentor/student relationship.

The first year of this study will be devoted to compiling a list of craftspeople who are living in Austria – a living archive. Once this list is sufficient and during the second and third years, the craftspeople listed will assist the research in running a one-day, two-day or three-day workshop. Participants under the instruction of the craftsperson will make an object using elements of a traditional way of working, which the local craftsperson has employed in his or her career.

The workshop introduces a traditional way of working, to the participants. It provides them with the opportunity to experience the way in which someone working in the traditional way approaches tasks. The workshop will also give participants the chance to work with a wide variety of mostly natural materials and discuss how these materials, which facilitate their artistic expression, are found in their original form, i.e. natural and processed resources, relevant to both their and others' daily life.

Frames of Reference

Philosophy and ideology

Pye (1995) describes creativity, in terms of craft, as a process of discovery; where end results are unknown; a "craftsmanship of risk", which requires a degree of tacit knowledge, as opposed to the "workmanship of certainty", which from today's standpoint of serial production, relies, to a greater extent, on explicit knowledge.

Being creative with craft reduces reliance on stored explicit knowledge and increases the ability to reconcile a constantly changing natural environment and resources available with the demand for increasing requirement for sustainability in manufacture (Cooley, 2007; Robinson, 2011; Sennett, 2008; Wagner, 2001).

Polanyi (1966) supports this argument, arguing that a 'tacit awareness' of nature is reached through the senses – by directly experiencing materials through the senses. Nonetheless, he suggests that tacit awareness can also be innate, which explains abilities such as an inherited instinct associated with tradition.

Dreyfus and Dreyfus (1986) describe in their book *Mind over Machine*, five stages of skill acquisition. They assert that the novice or unskilled person is likely to simply follow context-free rules. Conversely, the expert or skilled craftsperson will be more confident in using intuitive subjective judgement and rely less on routine. They also assert that the experience of creativity within craft leads to a tacit understanding and increased ability to grasp problems more holistically. Matthew Crawford (2010) in his book *Shop Class as Soulcraft* affirms that while Henry Ford's division of labour for his assembly line perhaps improved the profits of the few, it drained the blue collar's work of cognitive elements and set in motion a process of reducing the industrial requirements for the skilled worker. Crawford argues that schools should be more focused on re-evaluating how an education in craft may be of benefit to the larger society.

Field of research

This is divided into three overlapping areas: 1) the living archive of craftspeople, 2) workshops, and 3) the introduction of a traditional way of working in conjunction with modern methods of production.

How the craftspeople coach the workshops and show samples of their work to illuminate the relevance this work on the society in which they lived and/or live will be recorded.

Historical perspective

The apprenticeships of recent centuries required the apprentice to accumulate hand skills sufficient to facilitate the level of ingenuity required to solve emerging craft problems by his or her own merit and experience. An apprentice, under the guidance of a master craftsman, would commence working at the age of 14 and during his or her time as an apprentice s/he would witness a transformation, not only in becoming a skilled craftsman, but in the child becoming an adult.

The master's objective was to encourage the apprentice to learn the lessons of the trade for *himself* or *herself*, rather than merely becoming 'knowledgeable' about the subject. An apprentice was expected to practise the project being displayed in order to discover the 'secret'. Over time and through his or her *own* efforts the 'tricks of the trade' (with hints and pointers from his master) would become apparent. The aim was to coach the apprentice to become adept at developing solutions with his/her own strength of character. This led his/her work to become an expression of his/her individuality and therefore, with the artefact s/he created, a strong personal connection was established.

Craft education today still offers a methodical process of educating young people in a craft – for many in developed areas of the world. Importantly this education is accompanied by the necessity of working with others, often in a team and therefore, facilitates the learning and developing of communication skills. Fiell and Fiell (2006) affirm that the required need by industry today for cutting edge ability to communicate product design, underscores the value of and need for craft education today.

Social connections

The literature states that the learning and practising of hand skills are part of how humans developed, and their need to create is seated firmly in their psyche (Dickens, 1992; Sennett, 2008). Sennett (2008) suggests that the true meaning of skilled labour has a sense beyond mere production of a crafted object, i.e. one that carries insight into the human position within the material world of which all humans are part. He affirms clarifying one's position in the material world, or as he implies one's 'larger self', can be achieved with making by hand for the sake of making (p.9).

While there are those digitising art, and collecting and protecting plant and tree seeds or animal species, implicit craft skills are fast disappearing. This tacit knowledge cannot be harnessed in a library or museum; it is handed down from generation to generation and is held in skilful hands only through usage.

Living Archive

Argumentation

Because tacit knowledge can only be retained within the living, constructing a living archive is proposed to record those practising traditional craft.

The living archive will represent a sample cross section of individuals in Austria who possess such knowledge attained over many years of applying their skills. A minimum requirement of 40 years experience is specified not to exclude the many who have these skills in abundance, but to record the weight of their experience in 'practice', as well as their skill, in their answers.

The term 'traditional craft skills' has a variety of meanings; here, the implication does not exclude the use of electrically driven machinery, but the use of computer numerically controlled (CNC) machine tools or computer-aided manufacture (CAM) are considered to be outside this classification.

A living archive is at the heart of this study through which the areas of investigation here listed, will be possible. The living archive will provide the researcher with information essential to those best able to coach the workshops.

Japanese model

The inspiration for collating a living archive of traditional craft skills originated from the 'Living National Treasures of Japan' (crafts). It is based on a compilation of individuals certified as Living National Treasures by the Ministry of Education, Culture, Sports, Science and Technology of the government of Japan in the category of Japanese crafts. Please see link below:

[https://en.wikipedia.org/wiki/List_of_Living_National_Treasures_of_Japan_\(crafts\)](https://en.wikipedia.org/wiki/List_of_Living_National_Treasures_of_Japan_(crafts))

Crafts are divided into eight categories: pottery, textiles, lacquerware, metalworking, dollmaking, woodworking, papermaking, and work with silver, gold and platinum leaf. These categories are subdivided into a number of more specific subcategories.

Those working in crafts are eligible for recognition either individually (Individual Certification) or as part of a group (Preservation Group Certification).

The following chart (website screenshot) is provided by way of example:

Dollmaking [\[edit \]](#)

Name	Born	Category	Subcategory	Year Designated
Nobuko Akiyama (秋山信子)	1928	Dollmaking	Ishō Ningyō	1996
Komao Hayashi (林駒夫)	1936	Dollmaking	Tōsa	2002

Woodworking [\[edit \]](#)

Name	Born	Category	Subcategory	Year Designated
Sōhō Katsushiro (勝城斎鳳)	1934	Woodworking	Bamboo	2005
Noboru Fujinuma (藤沼昇)	1945	Woodworking	Bamboo	2012
Ryōzō Kawagita (川北良造)	1934	Woodworking	Wood	1994
Hirōmichi Ōsaka (大阪弘道)	1937	Woodworking	Wood	1997
Kiyotsugu Nakagawa (中川清司)	1942	Woodworking	Wood	2001
Akira Murayama (村山明)	1944	Woodworking	Wood	2003
Tatsuo Haisoto (灰外達夫)	1941	Woodworking	Wood	2012

Papermaking [\[edit \]](#)

Name	Born	Category	Subcategory	Year Designated
Ichibee Iwano IX (九代岩野市兵衛)	1933	Papermaking	Echizen Hōshō	2000
Sajō Hamada (浜田幸雄)	1931	Papermaking	Tōsa Tengujiō-shi	2001
Takenobu Tanino (谷野剛惟)	1935	Papermaking	Najioganbi-shi	2002

Austrian model

Creating a living archive is a documentation of living craftspeople in Austria. The categories pertaining to the craftspeople about whom information will be included are listed below:

- Age, name, gender and nationality
- Date of qualification/start of working professionally
- Location of their training and current residence
- Skills and extent of experience
- Personal hobbies and interests
- How their trade changed during their career
- Their opinions on the role their trade played in shaping the society in which they live
- Their thoughts on whether the learning of skills could have relevance to industry today and if so, in which ways
- Their ideas about sustainability with regard to any future role the learning of their skills could play

Given sufficient resources the researcher would like to include the following craft types:

- woodwork
- textile restoration
- leatherwork
- paper making
- pottery
- metal
- glass

Structured, interviews with individual craftspeople will be conducted. Numbers of individual craftspeople included naturally depend on availability; the researcher however, predicts that in the current period of time it is possible for every type of craft to be represented.

Methodology

Bauhaus

One hundred years ago this year, Walter Gropius and his Bauhaus team started to attempt to reconcile the social idealism of a craft-based society with commercial reality (Fiell and Fiell, 2006). Gropius argued the economic viability of perpetuating the craft mode while concurrently embracing the use of machines designed to produce en masse (Julier, 1997). Gropius, who employed staff from widely differing ideological standpoints, used his workshops as a platform for educational experimentation. He investigated how the process of craft could contribute to the production of objects of serial manufacture (ibid.). He encouraged his students to study the intrinsic qualities of material and make inventive constructions from *objets trouvés* (Fiell and Fiell, 2006, p.39).

Gropius argued that those who were skilful at working material by hand enjoyed greater ability in understanding the limits and possibilities of design. He contended that continuing traditional handwork was a method of gaining skills invaluable to the industrial designer* (Julier, 1997). Gropius firmly linked the artist with the craftsman and although the two never became synonymous with each other, the influence of the Bauhaus helped to elevate the perception of the value of the craftsman, who according to Gropius, "could breathe life into the soulless machine" (ibid.).

Although in the late 1920s, the Bauhaus moved towards fully automated methods of production, the directors did not abandon their ideal of combining the crafts with the work of designers (Fiell and Fiell, 2006). Cutting short their experimentation in this respect, the Bauhaus closed in Europe in the 1930s for political reasons. Nonetheless, the success and influence of their work provides a strong argument for continued research in this context.

For decades upper secondary (arts and design) schools in Europe have benefited from methodologies of the Bauhaus philosophy. An evaluation of all such schools in Austria pointed to considerable career successes on the part of leavers (observation period: 1 to 5 years after completing their education) and their contributions to the general economic strength of Austria (BMUKK, 2008).

* Described by the Bauhaus as an 'industrial artist'

Thus these results justify undertaking an investigation into which elements of craftwork contribute to this success.

Ecological appreciation of natural resources

The young have steadily become more reliant on technology for making decisions (Orr, 2002; Pye, 1995; Robinson, 2011; Sennett, 2008). However, Orr (1994), well-known for his theories on ecological design, affirms that technology itself is not the problem, but rather the way it is so often relied upon, and the way it is used to replace skilled handwork and crafts. Berry (1987) asserts that 'hands-on' craftwork is pivotal for appreciating the interrelated nature of all form.

S. J. Gould said: "We cannot win this battle to save species and environments without forging an emotional bond between ourselves and nature as well – for we will not fight to save what we do not love" (Cited in Orr, 1994, p.43). Working with natural and other materials resources provides the maker with insight into the characteristics of the piece being worked and therein potentially to the appreciation of the material as a resource.

Through working with a craftsperson in a traditional manner, the process of making, intellectually and emotionally positions the maker as part of and relevant to the source from where the materials being used originated. Therefore, they will use presentations of their objects made, to reflect on the process of making.

Workshop outcome

The philosophy and object of the workshop is to provide participants with no more or less than an experience; reflecting on this experience and relating it to daily life.

The criteria for inclusion in the living archive are as follows:

- Having worked for 40 years or more (including period of training) in skilled handwork
- Their work would have included elements of working with traditional methods
- Ability to proficiently pass on their knowledge in a workshop setting

Provisional Method

With the help of the organisations listed on pages 5 & 6 as well as other contacts known to the researcher, the initial year will be primarily focused on the construction of the 'living archive'. The initial stage of this will be conducting interviews with craftspeople living and/or working in Austria. The archive will be continually updated. During the second and third years, there will be a concurrent focus on organising and running of the workshops.

Craft schools, colleges and universities as well as members of the public will be approached/targeted to assist with this study. Participants will be able to express their ideas by using traditional in conjunction with more modern methods of craft while using natural materials. The students of the institutes which take part will be aged from 18; this is because adults are more likely to have previously gained sufficient craft hand skills, and competence to reflect on their craft activities. Workshops will have a duration of one, two or three days. They will run for a minimum of five hours per day (plus breaks), start no earlier than 8 am and finish no later than 6 pm each day. The researcher as well as the craftsperson listed in the living archive will support the participants during the workshops. The maximum numbers of workshop participants will depend on the size of the premises, but will not exceed 18. The craft workshops will run with a minimum participant number of eight. For two and three day workshops the last one and a half hours will be devoted to a presentation followed by an object exhibition. During the exhibition participants will be encouraged to talk and reflect on their thinking during the making process.

Prior to the workshop the researcher will:

- Offer and discuss which type of workshop craft type may be most desirable to any participating school, college or other institute authorities
- Provide materials to be used in the workshop
- Ensure the workshop is prepared and safe for the chosen workshop
- Coordinate the workshop with the craftsperson/s coaching the workshop
- Project manage all other matters

During the period of the workshop the researcher will:

- Give an introduction to the project which will include points of safety
- Motivate participants and help them decide what to make within the framework given by the craftsperson

- Ensure either the researcher or craftsperson is continually present
- Organise and create an exhibition and 'reflective presentation' of thoughts and objects made by the participants.

Online support for teachers

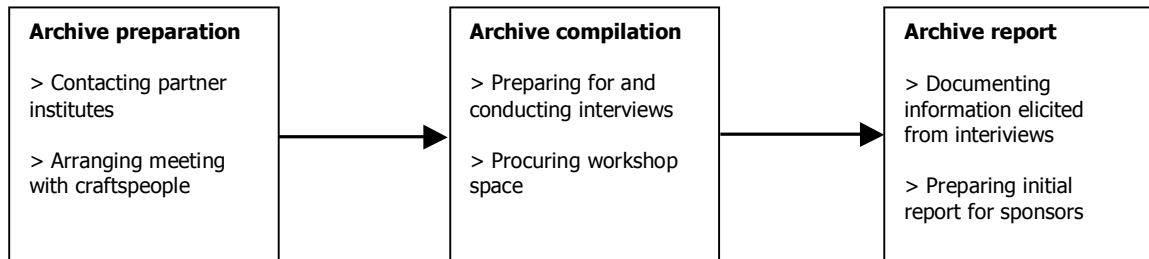
The following events and information will be digitalised and made available for download free of charge:

- Project packs, showing and describing short workshop projects
- News letter covering unusual projects which have led to exciting cooperations
- Exhibitions
- Information and ideas for learning craft in a traditional manner
- New hand skills in development
- Latest publications relevant to currently valid curricula
- Businesses which are harmonising elements of handcraft with industrial practices

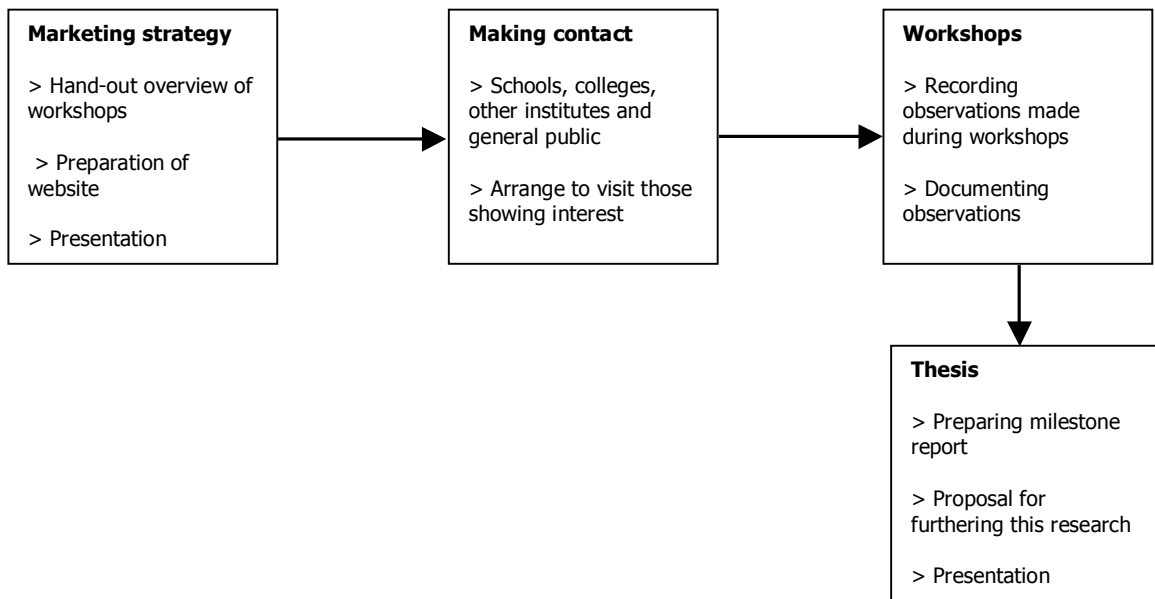
Project Management

In chronological order, the salient stages of this project are shown in the two charts below:

Year 1: the Living Archive



Years 2 and 3: Workshops



The following chart shows a provisional timetable for the three years' research.

How Making Makes the Maker. A Living Archive				Visions for Educating the Future Stewards of an Ecologically Sound Environment																																					
Period: 01.05.2020 - 01.05.2023				Johnny Ragland																																					
Task	Months	Start	Finish	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Contacting for living archive	5	01.05.20	01.10.20																																						
Interviewing for living archive	7	01.10.20	01.05.21																																						
Contacting assisting organisations	25	01.05.20	01.06.22																																						
Workshops	20	05.05.21	01.05.23																																						
Collecting/analysing data	30	01.10.20	01.04.23																																						
Holidays: School	6																																								
Report writing	3	01.04.21	01.03.23																																						
Presentation			29.04.23																																						

Material relating to the living archive will be constantly updated.

Twelve month report

After one year a report will be made available to sponsors of the project, which will include:

- Method of data collation for the living archive
- Archive compilation

Upon conclusion

Information containing a full 'milestone' report of all workshops, conclusions and written discussion will be made available to the sponsors at the conclusion of first three years of this study.

The discussion will include:

- Rationale for supporting the continuation of teaching of traditional craft studies
- Retaining options in colleges and universities for learning traditional craft for students on a course which includes aspects of design
- Suggestions for knitting traditional craft and digital product design studies together in school and college curricula
- Rationale for developing a 'new craft' by combining traditional ways of working with more modern methods of making, including methods of serial production
- Rationale for commercial-based concerns, to support the living archive venture
- Options for an Austria-based and funded living archive project which extends beyond her borders to encompass all provinces of Austria as well as all other 27 EU countries and the UK.

Benefits to the Austrian education system

- The Living Archive will potentially place the Austrian educational system in a unique position as an innovator and conservator of elements of traditional craft skills
- Public relations: participants will serve as multipliers; the Austrian educational system will be known by many and gain a reputation as an innovator of design education, in particular ways in which the embracing of traditional crafts can partner the acquiring of all competences required by industry
- Networking with national/international sponsors and cooperation partners in research in areas of education, economy, industry and media
- Gaining EU Project funding
- The archive will compile a list of craftspeople from a wide geographic area of Austria. The researcher will provide the compilation to the sponsors who will have opportunity to establish a think tank for innovation and product development

Financing

This plan assumes a 'full-time' investment of time from the researcher for three years and in addition, after the first year, around eight hours from a research assistant. This project will offer a full report after three years from date of commencement. Expenditure is divided into two areas of research; the living archive compilation and the workshops.

The living archive

Costs are mainly travel, living expenditure and accommodation, but some incidentals such as entertainment have been included under 'accommodation and living'. Because of the location of some craftspeople and the amount of recording equipment needed, travel to craftspeople will be by car.

Workshops

It is the ambition of the researcher that the initial three years of this study will be in part financially supported by organisations which can be considered stakeholders.

The premises will be a fully equipped workshop space, containing a wide variety of hand tools and some modern machinery. It is predicted that during the second and third years approximately 20 workshops will take place consisting of a mix between one-day, two-day and three-day bookings. This amount may increase as the reputation of the workshop widens.

The researcher will hold all necessary and required third party insurance.

Workshop prices per participant

- One-day – €80
- Two-day – €110
- Three-day – €140

Researcher's time

For reasons of ensuring the success of the project this has been included only in the first year of the calculation. The researcher predicts that during the second and third years there will be a steady increase of participants, which will provide him with sufficient remuneration.

Assistant's time

Eight hours per week for 30 weeks of years two and three. Calculated at €20 per hour.

Craft peoples' time

A cost of €150 per day has been calculated.

The table below shows predicted expenses for the compilation of the living archive in year one, and workshops in two and three. A participant number of 10 is calculated.

Entries are in euros.

Project stage	Purpose	Incoming	Outgoing	Minus balance
1 st year	Travel	-	4000	4000
1 st year	Accommodation and living	-	2500	6 500
1 st year	Interviewing costs associated	-	3500	10 000
1 st year	Computer and printer	-	2500	12 500
1 st year	Use of office space	-	2000	14 500
1 st year	Researchers time	-	24 000	38 500
1 st year	Craft peoples' time	-	-	38 500
1st year end		00 00	38 500	38 500
2 nd year	Hand and power tools	-	4500	43 000
2 nd year	Travel	-	500	43 500
2 nd year	Contingency	-	1500	45 000
2 nd year	Assistant's time	-	4800	49 800
2 nd year	Use of office space	-	2000	51 800
2 nd year	Rent of premises and insurances	-	24 000	75 800
2 nd year	Craft peoples' time	-	6000	81 800
	Materials		3500	85 300
2 nd year	Bookings	20 000	-	65 300
2nd year end		20 000	46 800	65 300
3 rd year	Hand and power tools	-	2100	67 400
3 rd year	Materials		3500	70 900
3 rd year	Travel	-	1000	71 900
3 rd year	Contingency and investment for increasing scope of project	-	7500	79 400
3 rd year	Assistant's time	-	4800	84 200
3 rd year	Use of office space	-	2000	86 200
3 rd year	Rent of premises and insurances	-	24 000	110 200
3 rd year	Craft peoples' time	-	15 000	125 200
3 rd year	Accountancy and other administration fees for 3 years	-	3000	128 200
3 rd year	Bookings	20 000	-	108 200
3rd year end			62 900	
Grand totals		40 000	148 200	108 200

Appendix

A summary of the professional bio of the researcher: Johnny Ragland is a Design Graduate with 19 years' experience in industry as a furniture designer/maker. His skills include: **design** in the context of **woodworking, teaching** the theory and practice of **design and technology** using techniques and procedures used in industry today, **business administration** and **project management**. He has undertaken intensive research into areas of how craft skills can act as a gateway to gaining competence in matters of design and sustainability.

A concise version of his curriculum vitae may be seen below. A full version, together with details of the many articles he has written pertaining to this research, can be seen using the following link:

<http://www.redoakleaves.com/resume.html>

1962 – 1979

Cradle to Immaturity

Born into one of the coldest winters on record, nonetheless the snow melted to reveal a green and rural area in southern England

1979 – 1982

City and Guilds: Guildford College of Technology

Three years studying carpentry, joinery and wood technology

1982 – 1989

Freelance Carpenter

Working in Brisbane, Guildford and London

1989 – 2001

Designer / Furniture maker

Within own firm, designing and making commissioned furniture

2001 – 2004

BA (Hons) Product and Furniture Design: Kingston University

Full-time degree course, the final two years of which were completed at The New Design University, St. Pölten, Austria

2004 – 2005

Settling in Austria

Renovating a 100 m² House in St. Pölten

2005 – 2007

Working in Austria

Project Manager / Designer for Umdasch Shop Concept, Amstetten

2007 – 2008

MSc Innovation and Design for Sustainability: Cranfield University

Full-time Master's degree course

2010 – 2019

Angewandte Kunst Vienna, Department of Design Architecture and Environment for Art Pedagogic

Lecturer in hand skills and wood technology theory
English trainer for Professors of craft (English for craft) and Professors of art and design
(English in the context of art and design)
Since 2010, project manager and curator for the Department's annual craft exhibition

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