

Level 6 – Research Framework Document

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Summary Sentence or Research Question:

Using exercise and an individuals daily routine to help use and exercise vital and different parts of their body which are affected by Arthritis.

Summary Statement:

Having researched Arthritis and looked at previous projects and products that have already been done for inspiration. I have chosen to focus on the overruling factors of Rheumatoid, Osteoarthritis and how users can be encouraged to engage within vital exercise, whether that being through therapeutic devices or an emotional connection.

Throughout this project I want to use materials that aren't normally associated with certain products, for example a normal ceramic bowl being created with flexible 3D printed materials to add a completely different form and context, whilst combining them with traditional materials such as wood. I will be reviewing already existing products and seeing where I feel I can design something more worthwhile for the user on a more personal level. Last year I focused nearly the whole year on creating objects on digital software, however this year I will be focusing more on the process of developing these digital manufactured pieces with other material areas.

Daily routines and exercise are the main themes running throughout my project, Whilst trying to factor both of these within my designs, I have used primary research gathered from multiple research trips and feedback gathered from a small questionnaire made. Through this process, I have designed two very different sets, the Life Stick and Tea Spoon. Both designed for different users and body parts the Life Stick was a concept for people suffering with any type of Arthritis, who may seek an emotional connection to an object as well as having troubles with mobility. Where as the Tea Spoon, is redesigned from the traditional tea spoon, into something larger and engaging which will help the user make a cup of tea with one hand, whilst also being a therapeutic hand device will could be used during the morning or evening, where a flare up is normally most common. The Tea Spoon, is focused to people suffering with Rheumatoid Arthritis within their hands.

Key Words:

Digital, Kitchenware, Tableware, Cutlery, Polymer, Ergonomics, 3D Printing, Rhino, CNC, Exercise, Arthritis, Exercise, Daily Routines, Emotional connection, Wood, Yew, PETG, TPU

Research Methods:

Standard research will be done online and through certain specialist magazines and brochures focusing on Arthritis.

Drawings and photographs together in my sketchbook and online portfolio.
Books taken from the library to help me with the historical and cultural research.

I carried a number of observations, during my trips to Reigate and beyond. I sat through lectures and also observed exercise classes specific to Arthritis.

I have and will be sending out an anonymous questionnaire I have designed to help narrow down specific areas for my project, for example different body parts to focus on, different times of the day in which arthritis causes the most harm (if there is one, changes for everyone) and also what sort of age range to focus the brief for. When people started feeling the symptoms and also how long they have had the condition for. What products people are already using and whether the short term or long term benefits are worth it.

I have spoken to Tom Ainsworth about the project and also have been in contact with a company called Remap. From Remap I have created a contact with Fred Malliardet, someone who has many years experience in the company and also an expert on human joints such as the ones I will be looking into.

I have travelled to Hassocks twice, to Fred's home and have conversation recorded with his permission.

Medium for Research:

Material and Technical Investigation:

Throughout this project I have used a number of process and materials to help identify what I want my finished outcomes to be made of.

During all of second year I carried out my of my practice using Rhino3D software, to then develop objects to be made using a 3D printer, laser cutter or CNC machining.

This year I have taken my Rhino modelling one step further, I feel very confident using the program to now make anything that I need too. I have experimented using materials such as PLA, PETG and TPU whilst also laser cutting acrylic to help me during my testing.

To accompany my 3D digital work, I have tested using materials such as Ash, MDF, Yew and Hazel wood. By using wood swell during my project I believe it gives me a nice contrast between the processes, which could then be developed further after university into hand crafted and mass produced products for people with arthritis to buy online and in shops.

Timescale of work across the Project:

During the first term of this year, most of my work was done by researching and contacting different people and organisations to try and help me delve deeper into the average person with Arthritis' life.

October was spent figuring out which disability I was going to be studying and making for. Speaking with Tom Ainsworth helped narrow it down to solely focus on Arthritis design.

November was when I first got in contact with Versus Arthritis and therefore Reigate. I travelled to Reigate firstly on the 27th of November for one of their monthly meetings and to meet many people.

December I carried on researching further, filling out my ethics proposal and also designing a short questionnaire ready to hand out in January.

After Christmas I continued contact with Reigate and Fred, whilst also testing and making using online software and also within wood.

March I finalised my designs and started making my final outcomes, both in wood and using Rhino. I had my last trip to Reigate in February which was vital for the coming months.

Identify potential professional contexts for your work:

This project has become very product design led, each of my final outcomes, I believe, could be crafted and sold either on small or large scales depending on the materials and products.

With the Life Stick, I would like it to be sold as a bespoke service to anyone suffering with Arthritis. The use of different materials helps the user pick which is best suited for them whilst also becoming personal to that person only.

The Tea Spoon, is made by both 3D software and hand crafted materials. Each could be taken into industry on completely different scales. The 3d printed spoons could be mass-produced using other means of production, whilst the wooden spoons could be put out in smaller batches at a more expensive rate.

3D Outcomes:

I intend to have scaled models completed on Rhino 3D design software that can then be made via some form of 3D modelling software, e.g 3D Printed finished models. Also wood and polymer testing models completed throughout the year to see the progress first hand instead of computer.

for the show I will have a set of spoons and a set of walking sticks, all made using different materials and components. I will have post cards explaining my journey through this year whilst also having large photos of each product in context.

Tests and component analysis will also be present in my exhibition space, as I need the viewer to be able to see a clearly narrated journey through research and making.

Presentation & Display:**Portfolio / Publication:**

Ethical considerations - If you answer YES to any of these questions then email Patrick IMMEDIATELY

Will you be asking anyone questions (interviews and or questionnaires)? **Yes**

Will you ask people to test or physically evaluate your work for you? **Yes**

Do you intend to run a workshop that involves a group of people? **No**

Do you intend photographing, videoing or sound recording anyone? **No**

Does your work involve children? **No**

ETHICS TIER 1 has been completed and signed off, I have received feedback from my questionnaire which is being used within my project.

Brief outline of ethical considerations:

I have filled out an ethics tier 1, which has now been completed and signed off by the committee, the findings from the questionnaire are being used throughout my project. No personal data from any of the participants is being used, however I am using some of their comments anonymously.

Photos have been taken not using any person's face, photos will be taken of the users hands for my final show.

BA(hons) Dissertation Title / MDes Essay Titles:

The story of hand to mouth;

Looking into key developments in the history of flatware and what new designs and materials are being used today.