

UOB. 3D D&C. L6. RESEARCH PLANNER

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Version:



Intro

Introduce the outline topic, nature and basis of your research project(s) and / or the context or problem? Can you give it a title?

1. Introduction

The project will aim to focus on the design and creation of a range of floatation & swimming devices that draw inspiration from mythical water creatures such as the mermaid. I am aiming to create these devices for prosthetic limb wearers so that their experience in the water can be enhanced and celebrated.

I would like to develop a brand and a company to distribute these products and hopefully continue to design and fabricate new ranges in the future.

The project will aim to produce a functional, wearable mermaid tail based on the mythological creature. The research conducted will contribute to a professional quality final product.

The secondary direction of this project is a focus on prosthetics, and the exploration of how prosthetic devices can be used to do more than simply replace a missing limb. Specifically, I intend to produce artificial lower limb replacements out of my tails, complete with full functionality.

Additional plans for this project include the design and production of floatation devices fashioned as wearable accessories. These will likely take the form of armbands, wristbands, corsets and tops, all with an accompanying aquatic theme that matches that of the tail itself.

Sufficient research that might support the project's progress will likely need to be detailed data on the production of prosthetics, as well as standard diving gear like flippers, monofins and breathing apparatus.



What?

What are you trying to find out and learn through the research ?
What are the **research questions** you are asking? What new insights or understandings are you seeking?

2. What?

The most important research to my project will be the construction of the tail itself. I'll also need to focus research on design details like fin sizing, textures, pricing and marketing. Administrative considerations will also need to be assessed, such as production costs, competition and business strategies. Formats of distribution will need to be analysed within the market, observing information from competitor websites and social media forums.

Social understandings are also a focus, largely to do with the general perception and depiction of mermaids and other related mythological creatures.

An underlying focus on producing a mermaid tail with prosthetic applications requires that I look into prosthetics as a whole. I want to understand how prosthetic limbs are made, how they are applied, how they're designed, what they're made of and how they are marketed. I also want to find out what kind of market there is for cosmetic prosthetics, as well as what kind of competition there might be.

The addition of accessories and other details will require the insight into how to produce working floatation devices like life jackets and inflatable armbands. These accessories will provide support for the user when they are either insufficiently confident to use my tails themselves, or require an extra safety precaution when they're not capable of supporting themselves independently in the water.



Why?

What are the aims and objectives of the research?

What are you hoping it will achieve? Why is it relevant and worth finding out and who (if anyone) might benefit or what might change as a result?

3. Why?

My research will assist in the production process, enlightening me on how to create a quality piece using industry standard techniques, all the while avoiding major setbacks or quality faults. The market for such a piece will also help me determine a target audience, tailoring the product and its presentation accordingly.

Business factors like financial, market and audience research will be vital when making a business strategy. I will need to identify what audiences consume most efficiently, and what kind of competition I will face in the market so as to make contingencies that solidify my strategy going forward.

Cultural factors like how people see mermaids in modern societies will heavily influence how my product is both designed and marketed, particularly in investigating any gender divide people may perceive. I want to devise a way of keeping my project gender-neutral, and understanding what it is the average consumer associates with either a masculine or feminine product will help identify middle-ground designs that avoid that distinction.



How?

What methods will you use to help answer your research questions? How are you approaching undertaking the research? What tools and / or equipment will you need?

4. How?

I will visit a number of local locations including aquariums, museums and natural landmarks that will contribute by way of first-hand primary research. No tools will likely be needed beyond a sketchbook, patience, an eye for detail and a compact camera to record the experience with. I plan to spend a lot of time sketching and analysing the physicalities of fish and other sea animals to familiarise myself with details like shape, movements, textures and behaviour.

I'm aware of a few upcoming events that will prove very useful to my research, including a recent performance by a troupe of performing mermaids at the local aquarium - a one-off chance to ask performers who frequently use mermaid tails in a professional context some choice questions about design and application. Interview questions must be open questions that leave room for a lot of information, avoiding questions that invite 'yes-or-no' answers; the more information I can acquire from each question, the more I will benefit from my interviewee's time.

A large bulk of my business research will be gathered from competitor websites that sell similar products to mine - a well-designed retail website can be a treasure trove of valuable operational data. I also want to try contacting individual professionals within a related market to query them personally.

Some investigation into the production and application of prosthetics will also be imperative; in order to help me convert my tails into a working prosthesis, I will try to arrange some interaction with the local prosthetics lab in Lewes. I would like to speak personally to a technician there, or at least appeal to them for a chance to see the work they do.

There's also a cosmetic prosthetics artists who also operates locally who might be able to help inspire me in my goal. The Alt Limb Project is an art studio that designs and manufactures limb replacements as a form of artistic expression, working from a client's specified directions to produce personalised custom pieces. I hope to speak to the technicians here and explore their work in person.



Who?

What references relate to your subject / topic, who else is working in this area what is the precedent of work in the field? (State of the Art)

5. Who?

Myths and legends that involve fantastic creatures will play a crucial part in my research. Mermaids and sirens in particular have a considerable cult affection around them, and so feature in many pop culture formats including movies, TV, music and print. Popular cultural media like Disney's *The Little Mermaid* and TV show *Sirens* are contrasting examples of how mermaids are portrayed in modern media, both of which already influence my own direction in my designing. I plan to use historic events and stories like Christopher Columbus' famous first sightings right the way up to modern reported sightings to help formulate a cultural relevant product.

The most significant competitor to analyse during my research is *The Mertailor*, a specialist American swimwear tailor that produces mermaid-themed gear including



When?

When will you do the work, what are the planned stages and milestones?

6. When?

The majority of my preliminary research - site visits and first-hand observations - will take place over the coming Summer. I don't want to waste any time in reaching the production stage as the exact amount of time needed to produce a finished product is currently unclear.

The first milestone of my research process is to conduct a bulk of online secondary research into mermaids, mythologies and prosthetics. The next step is more administrative research into audiences, competition and finances, followed closely by a start to my primary research at the local aquarium during a live mermaid performance. I also plan to double up my trip to this aquarium with some observations of the animals and sea life they keep there.

Following this stage, I have some questions prepared for Alison Lappa, an Amelia sufferer who will provide some incredibly valuable insight into the life and struggles of living without limbs. I also have an interview lined up at roughly same time with a local mermaid enthusiast called Lauren McQueen who will hopefully provide some practical insight into using mermaid tails recreationally.

Following this, I understand Hello Flamingo are due to come into the uni which will provide me with a chance to speak to a designer of a mermaid tail. Finally, I plan to fill in any gaps in my research with a number of books I have borrowed from the local library which provide some interesting insights and anecdotes about life as an amputee, as well as other more educational books about producing, designing and using prosthetic limbs.



If?

If you undertake this research what are the ethical implications - are you studying or involving people in your research?

7. If?

There is a curious gender assignment of mermaid tails that makes them inherently feminine, and as such I may need to devise a way to negotiate with the femininity. There are a number of potentially hazardous ethical obstacles in the current social environment, especially in regards to the LGBT community's growing focus on gender identity. The focus of that aspect of my project is to appeal to both men and women and create an all-inclusive community within my audiences.

I am planning to invite a number of people to interview, including someone who's missing a limb. I plan to ask this person questions about the circumstances of an amputation, which obviously will be quite a sensitive discussion. I will have to be particularly cautious about how I word my questions so as to avoid causing offence or discomfort; I plan to provide a quick run-through of what kind of questions I plan to ask before starting the interview so they know exactly what to expect before accepting my invitation.



Risk?

What are the health and safety risks and considerations related to your work and how will you mitigate against them?

8. Risk?

There is an unavoidable risk when producing any kind of marine equipment intended for use underwater. The largest risk of my project is that it may result in drowning due to misuse or manufacturing faults. A very significant risk is presented if I choose to make a prosthetic variant of my mermaid tail, largely due to the wearer's potentially diminished ability to swim without assistance.

Production also carries a certain amount of risk too. The materials I plan to work with can be harmful to one's health if misused, either through skin irritation or toxic fumes. There are a number of comprehensive health and safety precautions that I plan to observe when working with materials like plaster, resin, glue and fibreglass, as well as tools and equipment such as a heat press, glue gun or sewing machine.

Manufacturing prosthetics carries its own hazards; a disabled wearer will almost certainly be swimming with even more diminished ability, and so the importance of having suitable contingencies and precautions will be paramount. In response to this fact, I have begun deliberating some preliminary plans to keep clients safe when using my tails.