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Investigating the impact and potential of visual arts in the motor-neurological and psychological experience of scuba diving e textile users

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Abstract

This study will examine the potential impact on the wearer based on the field of visual studies, using semiotic analysis of the application of art style visual energy efficiency and product brand visual style in scuba diving smart textile.

The research is based on a theory of virtual digitization to produce a digital art practical project with visual feedback, emotional needs and practical production value for the consumer. In this digital clothing design project, it is planned to complete a phase of fabric practice for a smart textile scuba diving suit, and to be responsible for establishing a brand logo design that meets the functional potential of the product, completing the design of the digital product and modelling it to predict the potential psychological experience of different visual art styles on the product.

Introduction

This research project builds on the methodology of the digital program, which aims to develop artistic visions in virtual media or concepts through digital means of art creation, and distinguishes the digital program from traditional art creation and product design by focusing more on advanced design methods and innovative artistic perspectives.

In the research about the sport of scuba diving, in the 2016 DAN survey statistics, the casualty rate of the sport in the world has risen by nearly 30% from 2015, the report also pointed out that the mortality rate of the sport is related to a number of factors, including athlete's health, age condition, and the level of experience in the sport(Buzzacott et al., 2018), although in the category of extreme sports, the injury rate

of scuba Although the injury rate of scuba diving is in the middle of the range of extreme sports, the sport not only poses a potential risk of physical injury to athletes, but also brings negative psychological experiences (Hackfort, n.d.) to athletes depending on the changing sports environment. In order to visualize the physical state of athletes and prevent sudden psychological conditions, this study will investigate the influence of visual factors on psychological state and neural response based on the field of vision research, and design a set of visual effects that can reflect the physical state of athletes and have potential influence on the psychological experience of sports, which will be built on smart fabrics to develop more intelligent diving equipment (smart fabrics). It is planned to build it on smart textile to develop a smart textile scuba diving suit.

Scuba diving is a sport that often involves participation in free water at greater depths, with more than 70% of fatal dives occurring in marine environments (Denoble et al., 2019), where the visibility of the water decreases with increasing depth, and the lower visibility not only limits the athlete's field of vision, but also makes it difficult to observe the surrounding environment. At the same time, athletes tend to adopt risk-taking behaviors in their sports psychology, and changes in the environment caused by risk-taking behaviors, such as changes in water temperature, light changes, and biological disturbances, often bring considerable mental stress to athletes, and changes in the environment also affect the motor nerve response to impede the competitive experience and effect, and even danger (Low and Chan, 2021). Therefore, when the application of smart textile scuba diving suit can be used in specific scenarios, such as communicating effective information with teammates, when teamwork, the reasonable use of information on the clothing can reduce the impact of water depth on the communication between athletes, conveying key information; in the application of clothing to provide a certain degree of illumination: in the case of seeking help underwater, to be able to be better searched and recognized in the darkness. searched for and recognized. In terms of visual design, the modulation of design variables such as color, color temperature and pattern in pursuit of different psychological feelings (Chen et al., 2022), in order to achieve increased safety and improved exercise perception.

Research questions:

- 1.How does smart textile communicate function?*
- 2.How will the symbolism of the brand logo influence consumers in the semiotic studies?*
- 3.How to find the sources of symbols that create positive psychological and identity building for the project?*
- 4.What is the practical approach to designing visual graphics for art practice?*

Methodology:

1.1: Literature Research: This paper will collect and analyze literature on the types, uses, functional design in smart textile, so as to select the fabric object of the stage-by-stage research; through the literature research and analysis of past data, we will investigate the correlation between the logic of the logo design of sports brands and the logic of the consumer's choice, and provide theoretical support for the logo design of this project; we will investigate the neighborhood of sports psychology, so as to find out how to design a positive psychology and identity building for this project. The field of sports psychology is investigated to study the potential influence of visual arts and images on athletes' psychological activities.

1.2: Brand Case Study: The brand case will be analyzed based on the case study data of logo design of traditional sports brands, outdoor brands and diving brands, and the existing data will be used as a reference to construct the design direction of the project, to conduct a qualitative analysis of the correlation between the visual graphic and the consumer's feeling and to guide the decision-making of the graphic design approach.

1.3: Symbol analysis: Symbols are the relationships constructed between human beings, products of human society and non-human beings, which have symbolic meanings and imply each other(Mingers and Willcocks, 2017). Based on the IS system, the symbolic analysis can help designers to understand the connection between images, brands, and users' needs, and to duplicate them by examining the social attributes behind the images and by deconstructing them in a more systematic way to combine the images. Success Stories.

For the semiotic field, the research method of semiotic identification will be used to analyze and study brand symbols, meanings and cultural communication methods in conjunction with previous cases of visual research on commodities, combining with the product characteristics of the smart textile scuba diving suit, designing the representational meanings of the symbols of the product and its association with safety diving activities and motivations, and combining with the results of literature research. Continue to implement the logo design, so as to improve the user's psychological feeling when using the product; construct the correlation between sports psychology and visual art: predict and analyze the causes of the positive feedback of the visual influence on athletes' psychological and motor neurological feedback, and design the symbolic language to be used in the pattern design of the suit.

Symbol analysis methodology: the study will be divided into two dimensions: character and graphic as the information in the symbol study, one of which will be the study of the image design of the above brand logo case study on the meaning of hieroglyphs, and the second will be the study of the case of font selection of the same type of sports brand.

Results:

1. smart textiles' advantages in scuba diving and potential development possibilities

Smart textile is a new type of fabric with great application prospects, it is smart, lightweight and so on, and is currently assisting in the development of smarter and ideal wearable smart devices in many directions such as healthcare, sports and entertainment. As a new type of wearable device under development, Smart textile also has great prospects in the sportswear. By mixing traditional textile fabrics with conductive materials for information transfer, it is possible to combine them into a product with power transfer functions that can be used for communication, biometrics, monitoring, etc. The mainstream Smart textile fabrics are currently being used in the medical, sports and entertainment sectors. Currently, the mainstream Smart textile materials are ECM (electrically conductive material) materials, the fabric embroidery, sewing, weaving and other processes and conductive thread mixing and weaving, so as to achieve the conductivity between 0.1/m-500/m(Komolafe et al., 2021). Although too little conductive material involved in affecting the efficiency of electronic transmission, but enough to meet the needs of sportswear as a strobe signal information, line pattern design, logo design and other small area of material applications. However, in terms of power supply solutions, many Smart textile application design solutions are inclined to use the user's thermal energy or special friction methods for internal power supply to support the operation of wearable devices(Komolafe et al., 2021), but in scuba diving scenarios, the specific heat capacity of water greatly affects the rate of thermal conductivity of the material(Smith et al., 2020), the storage time of thermal energy between the human body and the fabric is reduced, and since most wetsuits are made of neoprene, it is not possible to use the material to store thermal energy for a long period of time. Neoprene suits are made of neoprene, which is watertight, insulating, smooth and airtight(Hyo-Suk Kim et al., 2020, p.), which is likely to cause undesirable friction effects and reduce the possibility of Smart textile power storage, therefore, capacitor technology research will be carried out as an aid to extend the operating time of wearable devices in the application of smart textile diving suits project. In the study of supercapacitors (SCs), triboelectric generators (TEGs), and enzymatic or microbial biofuel cells (BFCs) are united in a network of integrated circuits, where the two modes of energy reception of the human body are involved in a power conversion mechanism (Yin et al., 2021) , reaching a more bio energy in less time. Therefore, when using E textile for energy and power transfer in the water, the ideal SC application would reduce the impact of water conditions on the efficiency of the wearable device.

The use of Smart textile with scuba diving would be a good way to support more potential functional applications and visual designs. When scuba diving takes place in natural waters, smart textile can realize more design ideas to improve the athlete's experience and safety: different scenarios can be created through the design of color temperature and illumination to create a different psychological experience to seek to alleviate the high-pressure of the competitive environment on the participant, but also in

the group activities through the visual design of clothing and guidance to determine the position of the peer group. At the same time, smart textile's smart device that collects and stores energy under the SCs mechanism can better participate in the athletes' physical testing conditions, checking data such as blood oxygen, heart rate, and body temperature to improve user safety.

2.Sport psychology in scuba diving,

Scuba diving, as an extreme underwater sport, is accompanied by a variety of dangers during the sporting experience, and scuba divers face a variety of uncertainties during underwater activities, with uncertainties in physical conditions such as drowning, sudden deterioration of their own lesions, and environmental bioturbation(Denoble et al., 2019). Risks in psychological conditions are more compounded and interact with risks in physical conditions under certain conditions(Campbell, n.d.), and the negative experiences that a diver is subjected to throughout the execution of a dive may exacerbate the diver's negative feelings and produce psychological experiences such as anxiety, fear, nervousness, and lack of concentration, thus affecting the competitive experience and even the attention span. experiences that can affect the competitive experience and even life safety.

In the field of sport psychology, the sources and mechanisms of stress are distinguished as stress, anxiety and stressor(Hackfort, n.d.). In the application scenario of scuba diving, the stressor can be the changes in the competitive environment faced by the athlete, the subjective and objective expectations and evaluations of the sport, Athletes' health status and many other factors trigger the subjective feeling of anxiety, forming the psychological phenomenon of stress, and generating a variety of athletic safety hazards. Research has also indicated that the psychological phenomenon of stress ultimately leads to increased blood pressure, accelerated heart rate, abnormal muscle contractions and other effects on the organisms of the athlete, and greatly affects the athlete's ability to cope in extreme conditions. In the DAN 2019 report(Denoble et al., 2019), a 65-year-old female diver with no apparent disease experience developed sudden panic symptoms during a dive descent and maintained her balance at the surface with the help of her teammates, followed by artificial respiration, which remained unrescued. In this case, the athlete had no clear physical ailment, and DAN surmised that it was more likely that the patient's anxiety was caused by the abnormal state of the cylinder valves, resulting in symptoms such as increased heart rate and stiffness of the limbs and thus consequent loss of life during the dive. Among other conclusions drawn from the analysis of the data, it is clear that most diving fatalities and injuries occur among divers experiencing open water for the first time or diving for the first time in the sport(Ceniza et al., 2024), where conditions such as the athlete's first experience with the sport and inexperience become stressors that generate sport anxiety, thus affecting the competitive diver's clinical performance status and falling into crisis. The effect of sports anxiety on the competitive state, in addition to the teamwork of the companion system can to a certain extent reduce the athletes each other's anxiety feelings, to avoid the risk, the development of a set of pressure transfer visual design can also play an optimization of the effect of sports

experience. Adding emotion regulation mechanisms to the sport session can achieve the distraction of athletes' stress (Balk et al., 2013). This emotion regulation strategy uses images, music, and specific environments to create a distraction effect when athletes are making important decisions, thus reducing the possibility of choking under pressure. Based on this strategy, designing patterns and images and placing them in specific locations on the clothing can signal the distraction effect when athletes are experiencing stress, thus improving the experience of the stressful state.

At the same time, the position of the figure should not be too eye-catching, and the chromaticity and color design should be based on the principles of stress relief, softness and non-eye-catchingness, so that when the diver enters the quiet eye, he or she can improve the ability of perception to build up the degree of concentration (Brimmell et al., 2022) without excessively diverting attention from the sport.

In graphic color studies, blue is often considered to be the most popular color preference, and the higher the saturation, the more likely it is to elicit strong emotional arousal from the viewer (Wilms and Oberfeld, 2018), and blue tends to express a relaxing, soothing feeling in terms of positive color experience (Kaya, n.d.). Blue tends to express a relaxing and soothing feeling in positive color experiences, and therefore the visual design of garments tends to use medium saturation blue in color selection.

The impact of brand logo design on consumers

Logo can be a dematerialized brand composed of materialized products: an efficient, commodified and calculable retrieval (Manning, 2010), i.e. building a rational relationship between product, consumption and production by constructing an immaterial graphic with a specific meaning and matter, which can be regarded as a kind of immaterial intermediary in semiotics research, and by identifying this logo, it is possible to quickly and efficiently identify more extended information about the product. In the case of a logo for a materialized product, it is a retrieval mark that can also be a key visual representation to stimulate consumption and influence the perception of material use, in that the construction of the logo and the name of the product reflects the metaphorical nature of the user and the retrieval response of the consumer, respectively, and this symbolic metaphorical relationship can not only promote mutual consumption with the name, but also symbolize a specific consumer group, from which the positioning of self-consumption attributes alternative to self-selection.

In sports brands, LOGO in addition to follow the general design law, but also focus on brand rebranding (Williams et al., 2021), even if in sports. Even though consumers in the sports-related branding field tend to pay more attention to the image characteristics of tradition, loyalty, and classicism represented by logos, and rebranding can result in a negative response in terms of consumer loyalty, in the fast-developing trend of sports culture, an awareness of the social context, the development of the sport, and the user's aesthetic needs is still able to provide a more positive user experience, and the simplification of logo details is a very popular strategy of fine-tuning the logo. Facing a

trend of brand logo simplicity: The impact of brand logo design on consumption is a very popular strategy of fine-tuning. For the design of a new sports brand, the strategy adopted for the logo design will be to recreate the rebranding of the brand during the design process, thus creating a graphic that is guided, immersive and metaphorical in terms of the user's experience.

How does Brand Logo Design: How does Brand Name and Logo Naturalness Influence Consumers' Cognitive and Affective Feelings Cognitive and Affective Responses?), therefore, in terms of graphic strategies for logo design, a more figurative natural design will be investigated, as well as a semiotic studies to select appropriate natural images to construct logo graphics.

4. brand case study

This survey will select brand logos with figurative and natural attributes, and will divide the above brands into general sports brands and diving sports brands, and will also compare the diving brands on the market as a trending law for reference in the creation of brand names and glyphs.

4.1 sports brand Logo

Sports brand logo on the whole has the characteristics of simplicity, in addition to Figure a. Figure b. Other than the graphics are more inclined to use the combination of logo and letters or letters to convert the actual means of the logo, Figure a. Figure b. In the sports brand is more well-known and influential, so the lack of letter elements for the retrieval of the function of the impact of the tendency to be smaller. Fig. a. and Fig. e. both use streamlined lines to show the sense of speed. a. uses a gradually narrowing drawing technique at the end of the shape in the design means, and expresses the sense of speed through the changing curves of the sense of fluency, while the sense of speed of e. originates from the intersection of the triangular graphic and the letter 'N' of positive and negative types, and achieves the sense of speed from the effect of simulating the residual shadow. The symmetry of Gestalt Elements(Mohamed and Adiloglu, 2023)is used in the design of Fig. c. and Fig. d., highlighting the characteristics of simplicity, symmetry and structure. This sense of stability provides a more solid, sturdy and reliable feeling.

When the design is based on products for more outdoor or extreme sports occasions, more concrete and metaphorical images are used. Figure g. and Figure h. are both outdoor brands, and the products are generally designed for mountain and outdoor hiking applications, and their figurative animal graphic designs are yak and Mammoths, which are their brand names, and the consistency of the logos and the letters can better strengthen the brand identity and make it easier for consumers to use the logo. This kind of consistency between logo and letters in niche neighbourhood can better strengthen the brand identity and make it convenient for consumers to remember, search and guide,

meanwhile, the animals are all wild animals, which highlights the symbolic attributes of wildness, extreme, outdoor and so on. Figure f. and figure I. are fashionable and casual outdoor brands and mountain brands focusing on safety and professionalism, respectively. The former weakened the association between the animal image and the letters, but the graphic of 'wolf' and the paw of the wolf is still involved in the logo design through a strong animal image, creating an independent, masculine and outdoor feeling; The latter letter 'MSR' is actually the abbreviation of the brand name (Mountain Safety Research), the design of the name change is straightforward, efficient and reliable to reveal the search information of the logo, helping users to quickly locate the market, and this high search efficiency also reflects the brand image, and the mountain-like shape of the logo is the same as that of a mountain. This high search efficiency also reflects the brand image, and the mountain-like icon directly expresses the brand attributes of professionalism and safety.



Figure 1. Logo design for general sports brands versus sports brands that favour the outdoor scene (a)Nike, (b)Adidas, (c)Under Armour, (d)Reebok, (e)New Balance, (f)Jack Wolfskin, (g)Black Yak, (h)Mammut, (i)Mountain Safety Research.

4.2 Diving sports brand logo:

The design of Fig. j. and Fig. l. are similar in that they are both combinations of the 'c' graphic and the brand name. The former has a more figurative logo, and the combination of the 'c' shape and the harpoon-shaped graphic hints at the product's application attributes in terms of the graphic's application scenarios; while the latter is a comprehensive sports brand, and its symbolic attributes of oceanic, hunting, and exploration attributes are greatly reduced, presenting a more abstract effect. The latter is a comprehensive sports brand, and its symbolic attributes of oceanic, hunting, and exploring properties are greatly reduced, presenting a more abstract effect, from the streamlined image of the 'c' shape can play a different retrieval effect according to the brand's different product lines, and the graphic can sometimes be observed as a fishhook when it is applied in the context of diving products, waves, etc. Figure k. combines a graphic with a glyph, extracting the initials of the brand name and exaggerating the shape of the 'H' to make it more circular, similar to the shape of equipment items such as searchlights and helmets. Figure m. simplifies the brand slogan, which has the attribute of cultural propaganda, into an acronym, and designs the logo directly on this basis through glyphs.

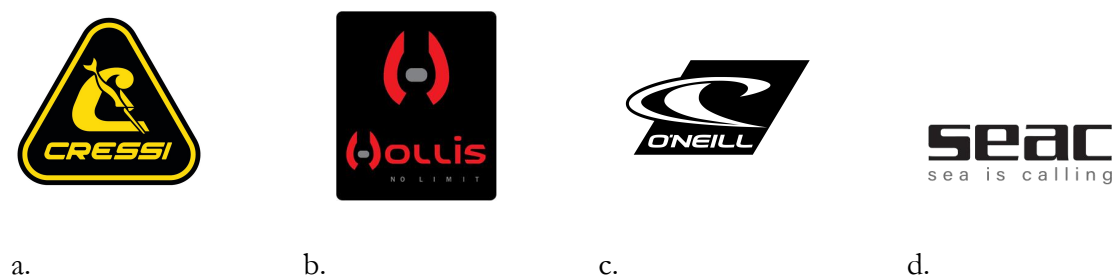


Figure 2. Scuba Diving Suit Brand Logo Design (a)Cressi, (b)Hollis, (c)O'Neill, (d)Seac.

4.3 sports brand colour and font trends

Sports brands generally use black, white and red in the colour application of logo design, and the use of yellow is also more common. Black and white can highlight the beauty and shape of the logo design, while red tends to highlight the high intensity of excitement (Color and emotion: effects of hue, saturation, and brightness), and is therefore popular in the intense sports branding. brightness), so it is popular in the intense sports branding where speed is emphasised. In terms of font design, sports brands tend to be more conservative and generally aim to convey information efficiently, while outdoor logos are designed with wider characters, with the spacing of the letters often wider than the standard characters, reflecting a sense of heaviness and sturdy security. The logo of diving brand is more technological and innovative, which shows more abstract font structure than traditional brand, and more inclined to use italic way of designing glyphs.

5.Symbol analysis of logo design

5.1 Smart textile scuba diving suit in semiotics step by step research

Symbolism research study, symbols are often not its reference to the appearance, but need to be constructed through the acquired learning, understanding of the extended meaning(Mingers and Willcocks, 2017), in order to better systematically build the symbols of the product logo, the following will be referred to part of the use of the IS researchers' step-by-step research methodology to summaries the findings of the article.

Purpose of semiotics: to serve the logo design of Smart textile scuba diving suit

The semiotics of this research is to find an appropriate symbolic image for the smart scuba diving suit and to construct a positive, safe and comfortable symbolic expression.

The study of the three worlds of semiotics in the scuba diving field: the personal world, the material world, and the social world. The personal world here refers to the user's personal feelings and motives for using the product - comfortable, immersive, and positive product images to promote consumer choice; the material world is directed to the figurative world. According to the brand logo research results, figurative animal graphics can provide a more emotional user image, and the use of a combination of graphics and glyphs in the design can increase the efficiency of retrieval; social world builds the interaction between symbols and society, and in the field of scuba diving, smarter materials and thoughtful visual design can help to build a safer environment for sports activities. In the field of scuba diving, smarter materials and thoughtful visual design help to create a safer sporting environment.

In the choice of logo image, based on the purpose of material communication will choose figurative, natural graphics, Smart textile scuba diving suit material application scene with marine attributes, so this design will choose the image of marine life to build the composition of the symbol, and in order to increase the safety of the movement, improve the user's sense of use of the chosen smart And in order to increase the safety of sports and improve the user's sense of use, the function of textile gives the product luminous properties, in summary, the selection of the symbol object belongs to the narrowing of the luminous image of the sea, based on the dissemination and recognition of the convenience of the symbol image was finally selected for the Angler fish as a design element.

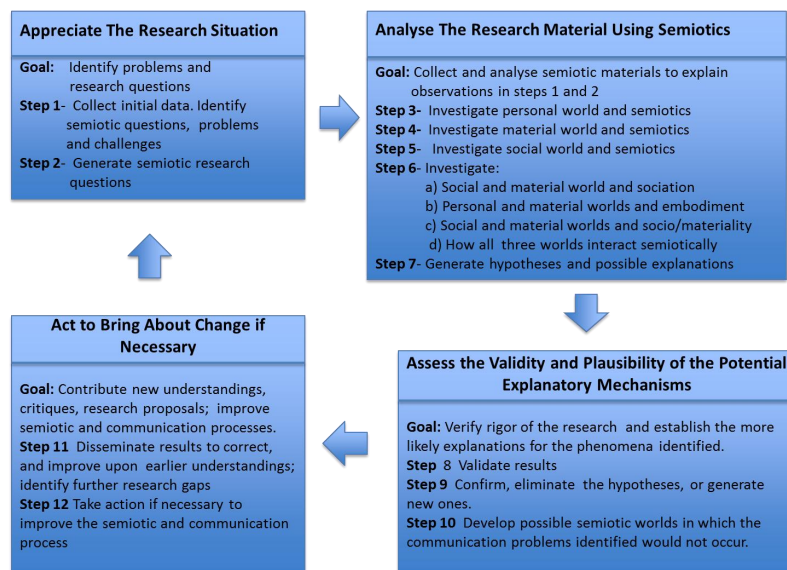


Figure 3. Step-by-step Semiotic Approach (Mingers and Willcocks, 2017)

5.2 Logo design process:

In order to follow the attributes of the logo's marine application, blue was used as the overall tone of the design in terms of color, and in order to achieve the principle of mildness and not overly stimulating the use of low to medium saturation with a tendency towards cooler tones, which even though the loss of the brand's ability to communicate, reduces the risk of exposure in the natural environment. Logo image a. and b. took the way of figurative Angler fish to participate in the design, in the design of a., even the shape of the submarine and the Angler fish in an attempt to increase the functionality of the promotional apparel, and then due to the inability to define the symbolic expression of the 'submarine', and the low degree of relevance to the product, then produced the design of b., the change of part of the design of b. was converted into a pattern of teeth made up of dotted lines and repeated arcs, but the overall shape was too complex and the atmosphere expressed was too wild, and the font was designed with a wide, thick, and large horizontal spacing, which was more in line with the image of a traditional outdoor brand. In order to optimize the verbosity of the styling language, the final design plan rejected the figurative animal scheme, but referred to Jack Wolfskin's design principles, extracting the key visual information of the animal: the wildness and masculinity expressed by the wolf was reduced to the graphic of a wolf's paw to fulfil the significance of the symbol, and therefore in the design of this design, the Angler Fish was extracted as a symbol. Therefore, in this design, the iconic 'lantern'-like light-emitting organ of the Angler fish is extracted, and the overall line has the characteristics of simplified and streamlined design, with changes from wide to narrow; the font design is changed from a wide-spaced to a narrow-spaced design, presenting a slimmer and more flexible glyphs, reducing the bulky and traditional image, and emphasizing the sense of science and technology.



b.



c.



Figure4. Three logo design versions (in order of design)



Figure 4. Schematic of the final logo on the virtual product

6.Practice overview, discussion:

smart suite for scuba diving

Our project is a digital artwork in smart textile. in this project, we are going to solve the safety problem during people are diving in the water, to help them become more easily noticed in the dark condition by equip the led on their suit. The Led lights can spark in the water to outline divers' shape so that divers can aware where the others' location. Meanwhile there are also the led screen on dyers' suit that can show their oxygen level can ensure the safely breathe.

Why we chose this project

At the very beginning we start some brain storms in our first meeting, to decide which area should we focus on in our digital project. Due to the diversity of our team members' background, we collect many different ideas from graphic design to the E-fashion, but most of the idea are relate to the smart clothes and the fashion area and this is the reason why we chose the smart clothe eventually. Since then, the target audience of our clothes are not decided, we have thinking about making the digital fashion clothe, the E-textile fashion or the spray material clothe, but neither of them demonstrate a more humane idea of being fashion or provide certain people the clothe to more practical application scenarios.

In this case, two of our members proposed the idea about the super diving clothe, this idea come from the actual diving experience when they try to overcome the problem as a diver to be safer and more comfortable during diving.

Assumptions have the team made

We simulate the diving scenarios based on their experience, although many diving accident happen is because the diver are not on top of the diving skills, beyond that we found out is the low oxygen level in divers' oxygen carrier. One of the most danger situation happens when the diver themselves lost the concept of their oxygen level under the water. Divers usually dive together as a group to help each other, to make sure their companions' safe by knowing the condition from each other's directions, analyzing the information together, checking the time they have diving so that can estimate how long is the oxygen can remain to used. Somehow the danger could still happen when people are not experienced enough to estimate their oxygen level inside the carrier or sometime just the oxygen carrier malfunction cause the accident happened.

In this case, we think it is important to know where exactly you companions' location is when people diving as a group. To fix this problem and then improve the sense of teamwork, people in the water have to check each other's oxygen level in case diver themselves cannot realize the low oxygen, to achieve this assumption, we equipped the Led light on chest of diving suite where can show the contour of the diver in the dark water then locate the diving member easily, by checking the number of the Led light, team member can know the overall number of the team, to Increased safety in diving activities.

Process

In order to better investigate the visual design direction and technical references of our E-textile project: smart light-emitting wetsuits, I investigated several brands that produce smart sportswear on the market, which produces tops that can detect heart rate and track the user's body data through stretchable biometric sensors. The principle of operation is based on the properties of the E-textile material and the advantages of the material, and we believe that the electrical energy transfer can be conducted from the thin film battery through sensors to the Led bulb to emit light. At the same time, we also investigated the sportswear from Cutecircuit, which has two round Led lamps on the chest to create a luminous effect, and we thought this would be a great reference for our diving clothing.

I think this project was a great challenge for me: I am a pure art student myself and I was exposed to such a functional and highly practical art project for the first time. For our E textile wetsuit, the use of fabric technology, the reference to technology companies and the design of specialised garments will be a great challenge for me in my group studies. In the first phase of the project, we assigned each member of the group a general area of work in terms of design, production, technical reference, copywriting, modelling and graphic visual design, based on the different project directions proposed by the group. The reason for my participation in Across RCA was that I was deeply influenced by aestheticism, but I was limited to the ability to communicate visual language. I hope to be able to work in a more practical and socially caring way through a more substantive and social collaboration, without the shortcomings of my own work as a traditional individualist.

At the beginning of the project, based on the idea of social care, it was necessary to put the wetsuit into real use for the user population. So I gradually defined my position in the team discussions and I took on the visual production, including the shooting of the final product and the graphic design of the clothing images.

By the middle of the project, we had developed a clear direction and a good distribution of collaborative tasks. We established the overall design and appearance of our e textile and the team leader collected and contacted technology companies with the relevant technology to try and get access to it.

During this time, after several offline group discussions, we worked together to critically learn from and discuss the projects of other groups at Across RCA, reflecting on the limitations of others' projects and identifying the usual problems with implementation: insufficient research of ideas and lack of preparation for future implementation, and the inability to experiment with the garments in large enough groups.

In the mid-project presentation of the results, I contributed to the collection of parameters for the sports technology brand, checked out the smart clothing technology

companies in production on the market and in the process provided a reference visual concept image of our e textile garment.

Later in the project, we had roughly completed a conceptually complete design and attempted to create a realistic physical model of the hand, conducting several experiments in the water.

Before the final project was implemented, the tasks were again distributed: Reuben and Manuela, the team leader, were responsible for the technical research and experimentation of the e textile fabric, Fangyu was responsible for the design of the appearance of the wetsuit as a garment, Edward was responsible for the 3D modelling through modelling software, and melody was responsible for the conceptual investigation and summary of the project and provided brand references. During the project, I worked on the logo and gradually identified our visual mascot, the monkfish, whose luminous nature in the deep sea was a perfect fit for the design of our garment. However, due to suggestions from the team to simplify the logo, and as it was too complex for a sports brand to be simple, safe and effective, I finally simplified the logo by extracting the features of the monkfish and creating a more minimalist text logo. In addition to this I was responsible for the integrity of the images and text in the PowerPoint, the creation of the angler as a typographic campaign for the brand, the editing of images of the experimental steps in the copy as a reference, and the critical summary of our project.

The results of the assignment and production of this project are relatively close to the initial assignment. I was not personally involved in the relatively high completion of the photography activity, but I still met my expectations of completing the visualization work for the project, completing the image design and image layout.

Assessment.

Successful: we have now successfully completed a well-developed wetsuit design concept, the teamwork between the group is clearly distributed and collaborative, we have been able to learn from each other in critical discussions, and we have established the branding of E-Textile wetsuits as a garment, as well as finding a direction for technical research on wetsuits and really getting into the experimental phase.

Unsuccessful: due to the limitations of our project phase, we were not able to actually put the garment into production and carry out a complete underwater test. Due to the lack of technical means we were unable to develop a more comfortable, practical and aesthetically pleasing technical waterproof fabric to ensure the safety of divers, and the lack of technical means also resulted in the lack of power of the LEDlights on the suit to provide a more efficient signal transmission. In terms of group work, I felt that our group did not communicate efficiently enough, and that the frequency of meetings and communication was so infrequent that there was a lack of detailed collaboration between many of the group members in their own areas of study.

This interesting and practical project has not only inspired me to learn about how to maintain positive and effective communication in teamwork, but has also opened up my mind as a personalized and purely artistic artist, helping me to develop a more socially caring approach to my work and to gradually shift from emotional visual expression to more public domain work. My personal lack of mastery of production tools as a graphic artist has prevented me from realising many of my current artistic experiments, and through my observations of my peers' behavior in solving technical problems during the teamwork process, I have come to believe that the solution to this problem lies to a large extent in actively engaging with others, the need for artists to gather information more efficiently, to learn knowledge by video, to communicate with technical departments by email, and to experiment on their own in search of productive diversity. In my future research, I will experiment with such communication techniques in an attempt to produce more technical images and to achieve a communal nature of communication with the public.

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