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**THE IMPORTANCE OF PROCESS
IN APPLIED VISUAL ART THINKING**

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Summary:

Belonging to the Contemporary art movement, Applied Visual Art is a new discipline being developed by the Faculty of Art and Design at the University of Lapland and Kemi-Tornio University of Applied Sciences. It emphasizes on enhancing communal and environmental development within the local areas. The project-based framework of AVA reveals the close relationship between art and design. Thus, this research interest is based on the process-oriented characteristic of AVA project, then aims to establish a connection between the importance of a art process and a design journey.

The main research method used is Art-based action research, in which art making processes are used to develop project and framework study and the key points to be study are community art, user participations and designers' roles. The data collected throughout different cycles of action in this research are cultural dialogues, art-based discussions and documentations, designer's notes and visualizations. In order to obtain the data, the main approaches used in the research are contextual research, participatory design, data analysis, documentation and evaluation.

The research shows the influences of AVA's process on adding values to the product's communication and interaction with users, thus, improving a product design journey. Moreover, it emphasizes the significance of a designer's role in an AVA project, while establishing more active directions for a designer/an art practitioner involved in project development processes. Even though there are challenges in the development work of an AVA project, such as cultural differences or objective misunderstandings, the framework proves to be sustainable in terms of themes, application and future developments. For later research and application of AVA thinking and process, the framework has the ability to grow as a tool for local communities' development and can also be employed by designers to improve a design journey in terms of product contextual development and users research. The need for AVA framework learning and educating, thus, may increase and result in a more active and multidisciplinary working environment for artists and designers.

Keywords: Applied Visual Art, community art, participatory design, Art-based action research

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1 INTRODUCTION

The confusion in the relationship between art and design is the intriguing, yet delicate topic. As a graphic designer, I have always thought that design and art exist distinctively, and there is a clear line between. Art should be all about emotions or expressions or both, while design should stay on the base of functionality and usability. The most well-recognized aspect that relates art and design is aesthetic, but it is just one in the numerous intersections between these two fields. This research is built based on the close relationship between art and design. There has been a new approach developed in the framework of contemporary art called Applied Visual Art (AVA), which examines the interrelation between art and other areas, design is one of those. AVA has been developed by the art department of the University of Lapland, in order to cope with the existing cultural, social and economic issues in the local region. It creates a framework for art to position itself in the sustainable development of other sectors. In the heart of AVA's focus, art thinking and art practices are the tools to construct a sustainable development in the North region. The discipline, however, has the possibilities to expand both in terms of time and space, with different applicability. This research, thus, is concentrating on how AVA can contribute to a product design process, while maintaining its own theme and framework.

I have utilized this opportunity of learning about AVA to improve personal working processes, as well as a design's journey in general. The research was project oriented, which means my collected data throughout my participation would not only contribute to the project outcome, but also be used to construct my own research task. My biggest interest is AVA can stand between art and design to be an art type that is functional. While art has always been known to be spontaneous, design is a system of actions that are created to solve a problem. AVA, however, has its own specific themes and is distinctively developed to solve social, environmental and cultural issues in the far North region. With its own distinctive contexts and processes, AVA has developed in different projects and created its own research and education framework. So, what are the similarities and differences in process thinking, planning and operating between AVA and design, in this case is Product design? Can the developing framework in AVA be utilized and contribute in any way to the design process?

In order to respond to these questions, I had employed the Art-based action research method as the backbone of my project research framework. This method required my participation in the project to be active and flexible. Even though my designer's role was important to create the product visualization, I needed to plan actions and roles for different steps of the project to make sure the steps aligned with the core actions of AVA. The project itself also stood in the grey area between AVA and product design, in which a deliverable visualization was expected at the end and the process involved AVA's approaches, such as user sustainable development thinking, users engagement as participatory design, and literature review.

As a new discipline, there has been research and study about AVA and its framework. While conducting the research, the biggest question to me was how AVA influences a design's process, and how this interdisciplinary working method can create more value for a designed product. Though, throughout the whole process, my research tasks may vary in terms of objectives and findings depending on each stage. Using the Art-based action research method, the research emphasis is on community engagement and participatory design and sustainable development of design. I implemented the research framework based mainly on my personal journey, which meant a chain of actions from gathering background information, learning contexts through practicing different art and research methods, planning, facilitating participatory sessions, documenting, and analyzing collected data. There are points in my research realization supporting the collaboration between AVA framework and product design process. On the other hand, I will also demonstrate some challenges I have encountered. The project can create the first step for further action in collaborating art in developing and creating new working methods for local business and industry.

2 BACKGROUND AND CONTEXT

2.1 Art versus design: the clash point

The correlation between art and design has always been an endless discourse in the creative field. It is not uncommon to hear and see bold statements like:

Design is not art, it is more functional.

Art is more about expressions, while design concentrates on solving problems.

Seemingly rational statements, however, always lead to rough arguments whereas the concepts of art and design are clashing against each other and non-constructive conclusions can be drawn out. In the article 'Art vs Design - A Timeless Debate' in 2018, Philips, a UX designer with more than 18 years of experience in the design field, stated that art may cross path with design, but it is totally a distinctive field. On the other hand, his debate opponent, Bowers, who is a brand designer and an illustrator, believed that design is one of the creative disciplines surrounding art. Revisiting the definition entitled in the Stanford Encyclopedia of Philosophy as Bowers did, the definition of art is briefly described. "Art exists and has existed in every known human culture and consists of objects, performances, and experiences that are intentionally endowed by their makers with a high degree of aesthetic interest." (Bowers, 2018)

According to Bowers (2018), art existed in the concept of aesthetic, which was more complex than its conventional association as "making things look pretty". This idea was received by Philips (2018), however, he added that depending on the types of design, some design fields based on the concept of aesthetic, while others based on science, process and practicality. Specifically, as in the world User experience design, there are more elements involved in the design subject beside the aesthetic aspect, such as the usability, target audience, functionality, etc. Yet, the narrowed concept of aesthetic cannot comprehend all these elements of design. Philips (2018) affirmed that aesthetic only contributes to make a product

seem to “work better”, while function and usage are the main features to make a product well-designed. The goal of design is simply to solve a problem about function and usage, which art is believed to be incapable of.

Before going for Bowers’s counter argument, let's quickly review the concept of aesthetic and the source of aesthetic interest in art. Aesthetic is a term that has always been associated with beauty, which is essentially just one value of the whole concept of aesthetic (Ferran & Huemer, 2019. p. 7). Since the birth of the new aesthetic concept in the 18th-century, there are values contained in aestheticism beside beauty, such as aesthetic experiences, function or enjoyment (Ranta, 2015. p. 59). Ranta (2015. p. 61) believed the definition of art based on aesthetic, therefore, is more evaluative and stipulative rather than just descriptive and classificatory. His idea led to the multi-dimensional expansion of art types, and the possibilities of future creativity. Taking Marcel Duchamp's Fountain as an example, Ferran & Huemer (2019. p. 8) separated the beauty value from the aesthetic of art.



Image 1: Marcel Duchamp, *Fountain*, 1917, photographed by Alfred Stieglitz (Wikipedia)

In 1914, Marcel Duchamp introduced one of the very first pieces of conceptual art, Fountain, which was a porcelain urinal, signed 'R.Mutts'. Fountain provoked endless discussions in the 20th century, and raised a controversial question "Is it art or not art?", but the most intriguing concept could be concluded as an everyday object that is taken out of its own context and modified can be a piece of art (Mann, 2017). As Duchamp created an art piece by taking a ready-made object and put it into a totally different context, he changed the nature of the object from 'useful' to 'meaningful' (Young & Priest, 2016). The piece challenged the common perception of art as a work reflecting beauty value and the role of artists as the creation. "Many artists shunned the ornamental function of art and suggested that the main goal of an artwork is not to please, but rather to provoke, unsettle or alienate the audience, or to prompt the reflection." (Ferran & Huemer, 2019. p. 8). The aestheticism of the artwork has been shifted from expressing beauty to evoking conceptual thoughts. In other words, the aesthetic of art can create a problem, that induces creativity and prompts action.

In conclusion to the never-ending debate on comparing art and design, the distinction between the two fields seems rather fragile than it was expected to appear. "It is not art versus design, but the unity of the two that is at the core of any superior design. In other words, good design incorporates art" (Philips, 2018). While people are debating on the functionality of design over the expressiveness of art or vice versa, the branches of one tree are not meant to be separated but coexist and complement each other.

2.2 The focal point on Visual art and Product design

In the favor of "Art solves problems", Bowers (2018) introduced a more contemporary example of "Art and artists have the ability to solve substantial problems" in his debate against his designer opponent. The Van Gogh Path, a public art installation created by Dutch artist Daan Roosegaarde, is mentioned by Bowers as the example of an artwork that practically interacts and enhances the experiences of its audiences. The art piece is a beautiful example of how an art approach can solve one given problem and create a result that is both functional and aesthetically attractive, as well as intriguing to users. Using the

very classic art inspiration, “The Starry Night” by Vincent Van Gogh, the artist aimed at establishing a connection to art history and at the same time illuminating the cycling path “with a special paint that uses energy gathered during the day to glow after dark” (Howarth, 2014).



Image 2&3: Daan Roosegaarde, *Van Gogh Cycle Path*, 2014, photographed by Dan Howarth (Howarth, 2014)

The mentioned art piece belongs to one common art form, which is the Visual art. However, since Visual art has been commonly defined as an art form that “refer to Painting, drawing, sketching, photography, crafting, sculptures, textile design, Digital Painting etc.” (Khan, 2017), the medium list does not seem to be comprehended enough to cover most contemporary art pieces, which are equivalent to “The Van Gogh Cycle Path”. Hence, Visual art should be broader and more flexible in terms of practices, mediums and themes. Rather than discussing how to define Visual art, it can be more intriguing to examine to what extent Visual art can reach and be capable of, beside the aesthetic value it has. The complexity of art making in general and in Visual art production can contain different types of human activities, including “perception, memory, motor control, language, spatial reasoning, not to mention imagination.” (Pelowski, Leder & Tinio, 2017. p. 81) By this means, the process of making a simple visual art piece is already complicated, however, the various contexts of Visual art nowadays have led to different representations. “The Van Gogh Cycle Path” is one example to prove that Visual art can be both aesthetically stunning and have a social context instead of based solely on self-expression. This also indicates a very blurred line between Visual art context and the fundamentals in design. In the discussion over theories of art in relation to aesthetics, it was claimed that the best work of art should not be based on definition but understand “the diverse capacities that art possesses” (Gaut, 2000. p. 41). It is also emphasized “what makes some-thing an artwork is a matter of it possessing a range of properties that are shared with other human domains.” (Gaut, 2000. p. 41). In response to this theory, the characteristics of art are expandable, it does not evolve around self-expression or pure aesthetic, but can be developed to have more interaction with the audiences. The horizon of Visual art, therefore, can also be extended. “The Van Gogh Cycle Path” has all characteristics and origin as an artwork, which are also inspired by famous artist’s works. However, it shared its functionality to respond to a specific user experience problem. Instead of using the common method, such as streetlights, to deal with lighting issues, Visual art provides a more in-depth solution so that the work can also be empathized by users and the solution is delivered in the most cultivated way possible.

2.3 Art and design, and the sustainable ecology

Why does design need to be sustainable?

Why can't it just look good and functional?

Sustainability can be understood as, according to the Cambridge Dictionary, the ability of a development process to avoid as less damage as possible towards the environment. From the history of Western development, this term has first been acknowledged from the Brundtland Report for the World Commission on Environment and Development 1987. In the report, it is stated that "sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs" (Dr. Brundtland, 1987. p. 15). From both an environmental and political viewpoint, this may be one of the first steps in realizing not only the importance of the environment but also the crucial responsibility to protect and prolong it. How to be responsible for the environment as well as how to preserve this natural resource for not only us but also other next human generations is still one of the most difficult questions. While history proves that development needs exploitation on different types of resources, sustainable development now requires emphasis on controlling the use of the environment and investment on innovative ideas to maintain and renew resources in order to become harmonious with our natural surroundings. With adequate consumption and enough maintenance, environmental resources can produce long term and stable benefits for human development. Sustainable design is one of the most proficient responses to support the idea of sustainability and sustainable development. The Brundtland report (1987. p. 37) has initiated the definition of sustainable development, however, it is considered as a broad concept, which is not applicable and practical. Thus, in a more particular area such as design, sustainability's idea may be more apparent and significant. In her book 'Sustainable Thinking: Ethical Approaches to design and design Management' published in 2013, Aaris revealed a newer perspective on how sustainability can be associated in the creative field. She indicated that the concept of sustainable design involves

“practitioners” to be more “visionary, adaptable and innovative” (Aaris, 2013. p. 13) . It is vital to create an output, which does not only reflect the subjective idea of art and design practitioners, but also respond effectively to the public and environment. Aaris (2013. p. 30) emphasized on different methods to reach the same goal of exploring the world of sustainable design. The concept is not limited in the use of materials or the process of “use, reuse and recycle”, however it depends on the understanding of each individual and how he or she perceives the idea and how much creativity can be applied into real life situations (Aaris, 2013. p. 31). The answer to sustainability in design is based on which value is being focused on and the method applied is the most important. Sustainable design opens another gate for designers in which they are encouraged to develop understandings outside of their comfort zone and to be more innovative in creating outputs that are not only aesthetically appealing or subjectively revealing but also practically functional and environmentally oriented.

2.4 Applied Visual Art as a new branch in Contemporary art

Even though art and design are tied together at the root of aestheticism, the branches have grown apart from each other for a long period of time. Until the recent development in Contemporary art, there are attempts trying to reconnect the missing links between the branches. Specifically, in the public art field, there is a new approach called “interdisciplinary”, which defines and contributes to the “interaction between art, architecture, design, and other disciplines, such as fashion and industrial design” (Perelli, 2003. p. 162). One of the brief and clear definitions of Contemporary Arts that I find accurate is “The term “contemporary art” refers to art made and produced by artists living today. Today’s artists work in and respond to a global environment that is culturally diverse, technologically advancing, and multifaceted.” (The J. Paul Getty Museum, n.d.). Contemporary artists have found a way to practice arts outside of the common frameworks, themes and mediums. Art pieces are not the main subjects, but only the tools for educating, provoking thoughts, responding to social issues, solving problems, etc. Applied Visual Art

(AVA) is one of the new practices developed under the umbrella of Contemporary art. The name of this discipline is quite intriguing, since Applied Art is one familiar art form that has been defined and acknowledged since a long time ago. According to the Oxford Dictionary, Applied Art is a "Term describing the design or decoration of functional objects to make them aesthetically pleasing. It is used in distinction to fine art, although there is often no clear dividing line between the two areas". Thus, how can Applied Visual Art be defined and how does it relate to the mentioned description of Applied Art?

"Contemporary art collectively is much more socially conscious than any previous era in art has been. A lot of art, particularly since the late 1980s, has related to one contemporary issue or another: feminism, multiculturalism, globalization, bioengineering, and AIDS awareness, for example." (Essak, 2019). Under the influence of Contemporary art, art practices are usually reflecting one or different issues relating to many aspects, such as , economy, society or environment. Thus, also responding to the Contemporary art movement in many aspects, AVA is a newly developed art practice which has been assembled by the Faculty of Art and Design at the University of Lapland and Kemi-Tornio University of Applied Sciences. The focuses of AVA are mentioned in one of the Faculty's publications as "the interaction between science and art, environmental engineering, tourism, and the public, social and health care sectors are potential spheres of operation." (Jokela, Coutts, Huhmarniemi & Härkönen, 2013. p. 9). There are multiple contemporary approaches, which are the experiential, project-based learning and communal and place-specific methods, utilized in the AVA framework (Jokela, Coutts, Huhmarniemi & Härkönen, 2019. p. 8). In his article elaborating the aims, methods, and context of AVA, Jokela stated the challenges which initiated the introduction of AVA in the art educational system during 2011-2013 (2013. pp. 12-23). The challenges were identified in the Northern Finland context all included in the needs to improve visual art education nationwide, the aim to improve funding's status for the Northern arts and culture, and the focus to develop a totally different art thinking perspective (Jokela, 2013. pp. 12-23). The needs to improve visual art education in Finland was significantly recognized. The research framework allows art practitioners to introduce their own artistic experience and professions to other sectors, where the concept of art is uncommonly known for.

AVA is constructed as a different discipline, which does not concentrate on particularly training an art skill but emphasizes on “the artist’s technical skills and personal expression” (Coutts, 2013. p. 49). The practice of AVA, therefore, has been developed and sustained as a distinguished form, which is not related to the common definition about Applied Art referring to decoration, ceramics, glass or furniture design in other contexts. There are different projects being developed under this discipline, but the results are not the artworks, but the process of introducing art to people, who are not commonly known to be in the art world. The art that contains in itself more purposes than making art, or expressing one's self, is one new development from the classic fine art, but it really does reflect the “contemporaneity” quality of art. “A contemporaneity that is not curious about how it might be surprised is not worth our time” (Narula, Bagchi & Sengupta, 2010). In the discourse about contemporary art, one of the most valuable qualities of this movement is its contemporaneity, which is the reflection on its surrounding occurrence in that particular period of time. At the time when cultural heritage and regional multi development are at risk, the need of a creative boost to change the way local industries have been operated is necessary. AVA, as a contemporary art discourse in this Northern context, can create more than tangible artworks but new methods to sustainably develop local industries, or as being said to stimulate “the development of the adventure environments and services in a sustainable way promoting the well-being of the region” (Jokela, 2013. p. 13). Besides, moving from the very mainstream fine art definition to a more contemporary concept, AVA positions itself in a more flexible framework, which mainly bases on the sense of time and place rather than any existing art thinking. Using time and space as the center subject to develop, educate and practice art, AVA aims to exit the normal context of art understanding to develop “more open learning environments” (Jokela, 2013. p. 14). These idealistic environments for this discipline are where “art making processes and overlaps with the rest of societal life rise at the center of the education” (Jokela, 2013. p. 14). Art practices in this framework need to be closely associated with education and research in order to not only illustrate the contemporary occurrence, but to take part in the cultivation and development processes of regional culture and economy.

Based on its time and space context, there are three “implementation areas” that differentiate AVA from other art types, specifically those in the same contemporary category, which are:

- Place-specific public art,
- Communal art activity
- The interstitial space between applied visual arts and art education

(Jokela, 2013. p. 16). Place-specific public art is a more defined concept of Environmental Art under the development of AVA. While environmental art is generated from and in direct relation to the surrounding environment, Place-specific Applied Art also originates in relation to a specific location but concentrates to correspond to the place through different dimensions, such as memories or emotions rather than just its physique. Beside environmental art, community art also finds itself fit within the AVA concepts and framework. In AVA, community art practices are the tools and the artists play the role of “an inspirer, counselor and a facilitator” in the art making processes to motivate and involve different community sectors in specific cultural and psycho-social communications (Jokela, 2013. p. 17). The last area covered by AVA is not related to an art making activity, but the relationship between AVA itself and art education. AVA provides a multi-leveled learning environment for all participants, the flexibility in its framework prompts artistic curiosity and active thinking. Even though art-based methods are not new in the educational fields, AVA reveals a more innovative learning aspect, where the aim of teaching is not predefined, but learnt and implemented along the process of art thinking, sharing and making (Jokela, 2013. p. 19). While AVA isolating itself from other art disciplines and implying its focus on environmental and community aspects in the Northern context, it is slowly constructing a firm foundation in sustainable development. The influence of art making in terms of cultural and social interaction and communication is undeniably growing strong and gaining more recognitions. The challenges of the program are also incorporated along the development, which can be improved and dealt with by its own education and research structure. Thus, this provides an idealistic framework for AVA’s future growth in terms of scale and applicability.

2.5 GEO design Project in Lapland

This is a cooperative project between the University of Oulu and the University of Lapland in order to create and experiment the usage of a new sustainable material, GEO-Polymer. While the University of Oulu takes part in experimenting, developing, testing and producing GEO-Polymer, the University of Lapland is responsible for researching the usage and applicability of the material. The University of Lapland recognized the possibility to conduct this research using AVA as the main approach. This creative approach was expected to not only solve the main research question, but on a different level, also promote a new effective research process to be applied in other industries, rather than only in the art and design field.

In their search for an approach to utilize industrial waste, The Fibre and Particle Engineering research group in Oulu University has found a prominent research subject, which is GEO-Polymer (Tuominen, 2016). According to the report (Tuominen, 2016), they have conducted a new way to produce GEO-Polymer as a concrete-like substance, which uses a “gigantic” industrial waste flow, for example from steel and mining industry. There are a variety of projects generated to develop this new material. In corresponding to the Finnish background, there are collaborations with different research groups to not only emphasize the popular recycling attitude among Finns, but also create new aesthetic and meaningful value for the material in environmental art (Tuominen, 2016).

The collaboration with the University of Lapland focuses on finding different types of companies, who are interested in utilizing GEO-Polymer in their productions. In order to achieve this specific goal, I was involved in the researching part, in which art-based practices were required to develop visualizations for the possible future use of GEO-Polymer. Since visual demonstrations were the best way to emphasize the flexible possibilities of this material, we elaborated the idea by introducing examples of distinctive products made by GEO-Polymer. A smaller and more specific project was initialized by the collaboration between the University of Lapland and the Rovaniemi Elderly Home, where I needed to

research and propose decoration ideas to renovate the common room using GEO-Polymer as the main material. The main idea of the project can be summarized in three questions.

WHAT IS GEO-POLYMER AND THE DEMAND FOR THIS MATERIAL?

GEO-polymer has been used in the past in the form of virgin materials extracted from the earth. It has been applied in building constructions and infrastructure in the United States and Australia. In this project, the researchers are concentrating more on the sustainability of the materials. The new GEO-polymer is produced from industrial side streams.

“The geopolymers depend on thermally activated natural materials like Meta kaolinite or industrial byproducts like fly ash or slag to provide a source of silicon (Si) and aluminum (Al) (Aleem & Arumairaj, 2012). These Silicon and Aluminium is dissolved in an alkaline activating solution and subsequently polymerize into molecular chains and become the binder.” (Aleem & Arumairaj, 2012). The material is considered to be an innovative alteration to the Portland Cement, the main ingredient to create one of the most used materials worldwide, concrete. According to Aleem & Arumairaj (2012), the common production of Portland Cement consumed a huge amount of carbon dioxide, therefore, contributes to global pollution. Even though the manufacturing process of cement accorded for approximately 7% of the global carbon dioxide emission, which was alarmingly larger proportion than all the world trucks’ emission, its consumption rate was increasing, and its greener alternative was not striking any success in attracting consumer's demand. (Dezem, 2019). While the demand for greener’s solution in cement production is neglected, there are efforts to reduce the carbon dioxide emission within this industry. Reported by the European Cement Association (n.d.), there are several breakthrough solutions being developed in this industry to reduce its negative effect on the environment. The solutions concentrate on technology and improvement in factory production in order to maintain the supply chain in Europe, as well as the employment and economy status. Their solutions can be summarized into two main categories, which are improvement in manufacturing efficiency and replacement of raw materials (European Cement Association, n.d.). The GEO-Polymer research sits in a different category, it is designated to completely substitute for the popular

Portland cement. The material has similar characteristics with cement, however with the reduction in its dependency on processed materials, its production process is proved to emit a remarkably less amount of carbon dioxide, both directly and indirectly through energy-saving operations (U.S. Department of Transportation, 2010. p. 2). However, there are several causes that limit the use of this new material. In an online academic discussion about the limitations of GEO-polymer and why GEO-polymer has not been commercialized yet, Pandey (2019) has briefly summarized three reasons, besides the well-known fact that raw material for GEO-polymer is quite expensive. Firstly, it is difficult to create due to the need of special handling and harmful chemicals requirements. Secondly, the deliverables are in pre-mix or precast form only. Finally, the Geopolymerization process is sensitive and unstable, the results are not unified. Because of those reasons, GEO-polymer has not been publicly introduced and its research phase is still prolonged.

WHAT ARE THE POSSIBILITIES FOR THIS MATERIAL AND HOW TO DEAL WITH ITS PROBLEMATIC APPLICABILITY?

Despite the limitations, which are common to a new experimental product, GEO-polymer has a variety of possibilities if it can officially replace the unsustainable material, Portland cement. GEO-polymer presents the characteristics of a game-changing material, which are more durable and environmentally friendly. Its benefits are worth considering in terms of sustainable development, so there are undergoing projects trying to deal with its limitations and then deliver it to the commercialization process.

Until now, the GEO design project in Lapland has not only discovered the new way to solve the existing problem of lacking expensive resources for GEO-Polymer production, but also indulged in managing the substance. Thus, this is a big step in bringing GEO-Polymer closer to the commercialization process and improving the sustainability of the whole related industry.

While focusing on the use of industry side products or waste to create GEO-polymer, the GEO-polymer research project in Lapland is expected to solve not only the economic issue of

this material, but also introduce a greener solution to the already considered eco-friendly product. During the research process, the collaboration with the Art Department in the University of Lapland also attempted to resolve the deliverable's problem of this material by exploring the applicability of GEO-polymer concrete in product design and how to introduce it to the right consumers.

Here are some initial examples for GEO-polymer products to be developed.



Image 4: Examples of products aimed at in the GEO design project, 2015-2018, University of Oulu & University of Lapland (Oulun Yliopisto, 2018)

WHAT IS THE AIM OF THIS ART PROJECT?

The main objectives of this project are to find deliverable solutions for GEO-polymer concrete and to introduce the aesthetic of sustainable products along the way. Most people would think that recycled materials often result in unattractive products, and that perception affects the development of the recycling industry. The new GEO-polymer uses recycled materials, and it has the possibility to be eco-friendly, functional and aesthetically attractive in terms of product values. In order to introduce the new perception on recycled products and familiarize consumers with the materials itself, the applicability of GEO-polymer concrete in product design is a new aspect to be explored.

Since the handling and delivering this material is one of the biggest problems for GEO-polymer to be commercialized, the communication to consumers and manufacturers needs to be commenced and modified. The project aims at using AVA method to engage the targeted consumers and manufacturers to the potentials of GEO-polymer concrete, particularly in product design. Thus, the support of these new groups of users can accelerate the success of GEO-polymer's commercialization process and anticipate more possible solutions to introduce this material to the public.

In relation to my research, the project situated in an appropriate way to demonstrate the relationship between AVA and Product design. The collaboration between the University of Lapland and the Elderly's Home anticipated a concrete product's visualizations, however the process was not limited in any frameworks. It was a possibility to develop a framework using AVA methods and approaches, which would be suitable for my research purpose. In this research process, I could shift my role from a designer to an AVA practitioner, which required more active engagement, such as knowledge acquisition, session plan, data collection and analysis. This perspective search, therefore, could both improve my understanding on how AVA works and establish the crucial framework for me to map the research process to product design's value.

The results of the research were expected to be delivered and analyzed to be utilized in other projects, for example the possibility of this material to be used in decorating projects in the Tontulla Elves Village. Since the final visualization and the product were not the sole achievements in this project, but also contributed factors in future research and collaboration, the research and documentation process should be prioritized and carefully planned. This perspective on the importance of the process in general is crucial to my study. To some extent, I expected to explore more possibilities of this new art practice and its ability to enhance the value of sustainable development in design.

3 THEORETICAL FRAMEWORK

3.1 Overview of the Theoretical Framework

The theoretical framework of this research employs the relationship between Art and design as the conceptual base to explore the correlation between two more particular fields, which are Applied Visual Art and Product design. As mentioned in the background information, art and design do not exist separately, but rather are just different fruits growing from the same tree. In order to understand how two fields relate and interact with each other, the study of the art and design process has to be conducted, and it should be based on the progressive experience through art and design practices. Under the perspective of Applied Visual Art (AVA), the relationship between art and design can be closely examined and documented. In an AVA process, the interaction between two or more different fields is one of the main emphasis of this new approach. The artists or designers, throughout an AVA project, do not work solely by themselves or in their own comfort zone, but base one their professionals to learn, experience and practice other practices. Hence, the experience in cross fields can be utilized to establish the framework on how these fields, specifically Art and design in this case, relate and support one another. The impact of this approach on a process can also be analyzed, how this collaboration between different fields and techniques can improve or affect a process and on which level that this effect can create differences not only to the creative world itself. On one hand, the art practitioner's experience is a valuable input for an AVA process, on the other hand, the participation of other sectors in the project is also a critical factor contributing to the output of a project.

There are two main approaches used for this research, which are individual research and user participation. As for the research, I started with a question about the product's functionalities, then defined the hypothesis through personal research and visualizations. The project, then, collaborated in a renovation plan for the Rovaniemi Elderly Home, which will be utilizing GEO-polymer as the main material. The first user engaging session was organized with expected users of the final product, who, in this case, are the elder residents currently living in the Elderly Home. After gathering information on the first participatory session, I continued to work on analyzing the information based on new visualizations and

organized a second session with a different group of audiences, who were art and design students of the University of Lapland.

“In the context of arts-based research, it is the arts-based researcher's role to integrate herself into the community of participants as learners, and to initiate introspection, reflection, and representations of that teach.” (Finley, 2008, p. 76)

Practicing art as a main medium to develop research insights and questions, and to plan a research process is not new, but rather quite a common approach for many researchers worldwide. The approach of this research, however, is formed based on a bigger research framework formed by the Faculty of Art and design in the University of Lapland. The research aims at exploring the relationship between art, design, research and sustainable ecology. Using art-based action research as the main method guideline for not only researching, but also practicing and educating. The whole framework, therefore, involved a large number of different projects with various requirements, objectives and approaches. There have been other projects established under this framework. Also being a part of the program, this study is reflecting on the interrelationship of AVA and Product design to highlight the crucial role of the AVA's thinking process and its possibilities to be applied in other fields. In order to accomplish this research objective, I have to be involved in the research approaches as mentioned above, not only observing the process, but also actively participating in various roles throughout the whole project. The most important part of my research is the learning experience through the AVA process based on the main concepts related to the framework and the mixed techniques used in order to gain and apply these experiences on the project development process.

3.2 Community-based approach in AVA

One of the main approaches in AVA art is Community art. “Within community art and communal art education at the University of Lapland, art activity forms have been developed together with young people, the elderly, village communities, schools, and immigrants,

among other things, based on the Northern socio-culture” (Jokela, 2013. p. 17). Along with cultural aspects in art, the community factor also plays an important part, whose values are usually neglected or underrated. Under the influences of the globalization process, the value and identity of small communities are usually abandoned. It is believed that “community empowerment through the arts can alleviate some of the adverse excesses of globalization” (Kay 2000, 415). Community art has been considered as an important approach in AVA, which has the ability to be developed in the “public and social sector” (Jokela, 2013. p. 17). In Community art, the local community is the main subject to initiate artistic actions, which are meant to support “cultural identity and psycho-social wellbeing” of the community itself (Jokela, 2013. p. 17). There are important concentrations in Community art in general are community consultation, involvement and ownership (Kay, 2000. p. 419). Community consultation is consideration of the community's contexts, expectations and preferences, while community involvement focuses on engaging community's participation in different projects aiming at “personal development” and “attitudinal change” (Kay, 2000. p. 419). As to use artistic activity as the empowerment tool, Community art also aims to encourage the community taking ownership of the art projects and continue developing them (Kay, 2000. p. 419). In AVA, Community art has divided the aims into smaller and more specific tasks. Jokela (2013. p. 18) has indicated 5 areas to be developed in Community art :

- Shared further development of the methods of applied visual arts and service design.
- Developing inclusive and participatory working methods and artists’ expertise of cooperation by adding pedagogical skills.
- Developing cooperation between the public and social sector and artists at the administrative level.
- Developing cooperation between applied visual arts and tourism: events and other art and cultural services.
- Developing art-infused entrepreneurship in the social sector.

In Community art, the meaning of art making does not mean to create an art piece, but to engage, share, connect, empower and develop. Artistic actions are the main tools to strengthen a community in terms of cultural, social and economic situations. Cultural sustainability is the centerpiece of all actions in Community art (Härkönen & Vuontisjärvi,

2018. p. 27). The role of an art practitioner in Community art can be flexible, but concentrates on developing research, engaging communications and operating workshops or art making sessions. In order for communal projects to be well developed, it is important to improve collaboration and communication between the art practitioners and the local community and within the community itself (Härkönen & Vuontisjärvi, 2018. p. 27). Those actions are the most efficient tools to develop understandings about cultural identity and the community's context, expectations and preferences. Thus, they are also the core of communal activities in AVA.

3.3 User engagement as part of the participatory design process and the designer's role

The main approach employed in this research was participatory design. Participatory design belongs to the group of design approaches that encourage collective participation in a creative process (Fuad-Luke, 2009. p. 147). According to Fuad-Luke (2009. p. 147), the reason behind the emergence of these design approaches was "participation emancipates people by making them active contributors rather than passive recipients". Participants, throughout the process, develop their understandings and establish connections to the products or services. Another underlying cause for this new trend is "the increasing complexity of problems that all organizations face" (Fuad-Luke, 2009. p. 147). In a broader view, not only organizations but also communities and environments have to face complex problems. Thus, "participatory design has spread out from the workplaces to a variety of social and technological contexts", although it still keeps its core at valuing the importance of participants and maintaining a "creative and proactive" design process (Koistinen 2018, 68). The steps of a participatory design process involve finding, sharing, creating, implementing, and it is claimed to be problem-focused instead of solution-focused like other typical design processes (Koistinen, 2018. p. 68).

"Designers are needed in participatory design to explore and keep track on topics, tools and methods that encourage the creative process in non-designer participants." (Koistinen, 2018.

p. 70). In a participatory design process, although the role of a designer may be flexible and not solely work as a creator, their importance is still inevitable. Each designer possesses his/her own professional skill set and understands the creative production process, also, as solving problems is their nature, it is important that they manage a participatory design process by what they are and can be good at including researching, facilitating, analyzing and visually communicating.

4 METHODOLOGY

4.1 Art-based action research overview

The main method of this research is art-based action research, which has been developed specifically in the Faculty of Arts in the University of Lapland. "Art-based action research is a research strategy which guides the progress of research in the cycles of action research and uses art as a catalyst for development work" (Jokela & Huhmarniemi, 2018. p. 9). Art-based action research is an important tool that connects my research interest in the AVA's framework and my study subject, in this case is the process-oriented characteristic of AVA. The main actions used in my project are the common approach in AVA, under the shape of community participation and active art research and practice process. In order to apply Art-based action research method on my own framework, I needed to understand the method itself and how a methodological approach can prompt actions. According to the Art-based action research definition, art is not the center of a research process, but rather a developing tool. Art-based research, on its own terms, should be considered as "any social research or human inquiry that adapts the tenets of the creative arts as a part of the methodology ... the arts may be used during data collection, analysis, interpretation and/or dissemination" (Jones & Leavy, 2014. pp. 1-2). According to Leavy (2018. pp. 9-11), there are advantages which can be achieved by utilization art practices in research. One of which is the learning aspect that art research can bring, by offering new insights and answering theoretical research questions by actions. The Art-based action research focuses on the relationship between four dimensions of research approaches, which are theoretical - practical, and

subjective - objective. Jokela & Huhmarniemi (2018. p. 11) has developed an Art-based action research diagram to define different research approaches based on these four dimensions.

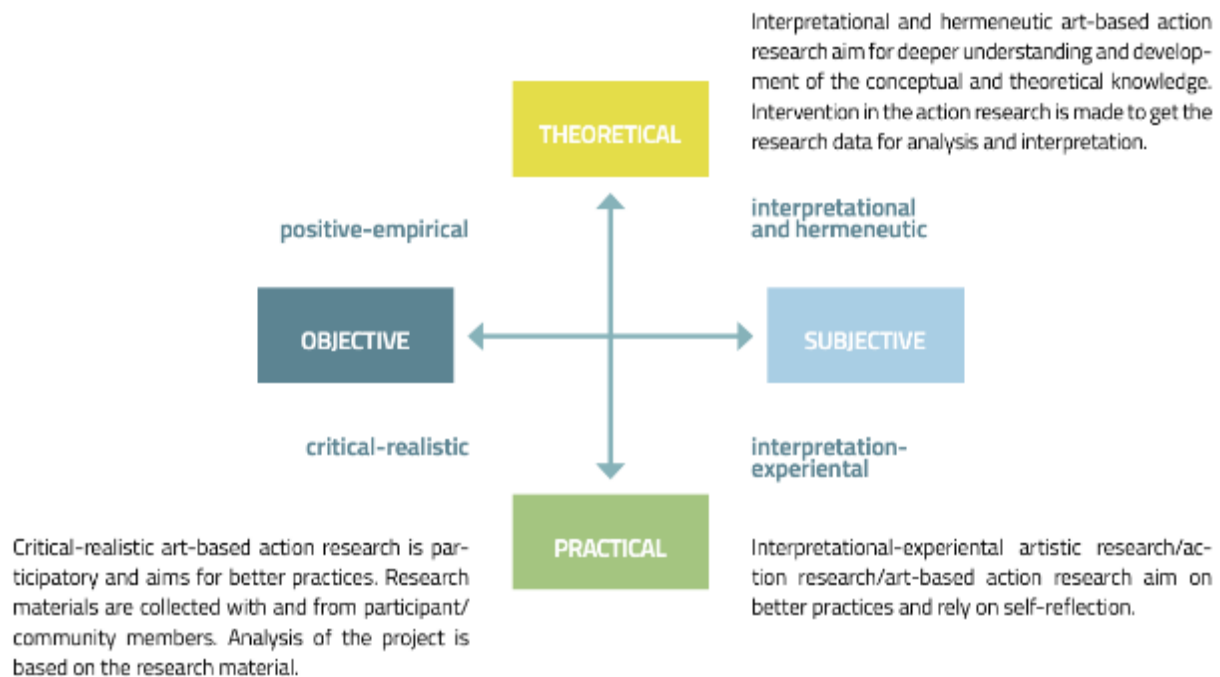


Image 5: The art-based action research diagram created by Jokela & Huhmarniemi (2018. p. 11)

According to this diagram, my research, which based on participatory action and data analysis could belong to the critical-realistic criteria.

Art-based action research is a new research method; however, its original context can be based on Action research, Artistic research and Art-based research (Jokela & Huhmarniemi, 2018. pp. 12-13). There are main emphasis of Art-based action research, which are also the focus of others. The emphasis in Art-based action research can be summarized in 4 points, which are "inclusion, interaction, and a sense of community", " interaction cyclicity" and "contemporary art phenomena" (Jokela & Huhmarniemi, 2018. pp. 12-13). As it is defined as a "cyclical process of research and development", the process in Art-based action research plays an important role (Jokela & Huhmarniemi, 2018. p. 14). All the actions in one cycle are

documented and utilized in another cycle, each step, therefore, is well planned and executed to be a foundation for the next step's objective and action. "Each cycle of art-based action research begins with planning, setting goals, and investigation of socio-cultural situations in the community or place. The next step of making action and artworks can be defined as an intervention. Activities are observed and documented as the research material. Each cycle closes with reflection on and analysis of the research data" (Jokela & Huhmarniemi, 2018. p. 15). Its cyclical process defines Art-based action research's value and quality, where it is different from the linear process in Art-based research.

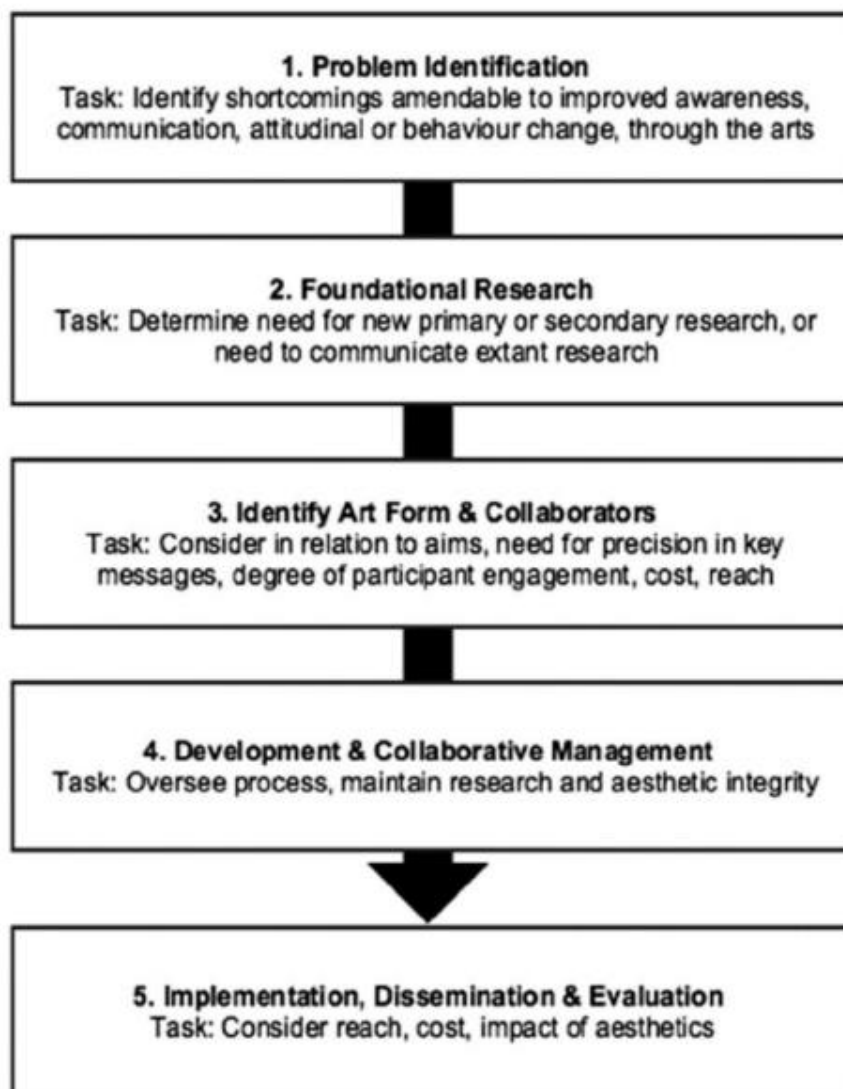


Image 6: Status of developing arts-based strategies by Archibald & Kitson (2019, p. 11). The diagram shows a linear process of Art-based research which is different from the cyclical process in Art-based action research.

Documentations are important in Art-based action research. There are a variety of documentation methods in Art-based action research, ranging from study notes to complete drafts or plans. The use of documented medium will depend on the researcher's choice and will be compiled at data for further analysis and reflection. These data are resources to construct the research strategy and framework, the data from the previous step will be used for planning and defining the actions in later steps. The data collected can also be used as artistic elements for exhibition or art installation. In many ways, the documentations should be analyzed and compiled at the end of the project as a reflection of the researchers on the whole process or the cooperation between the researchers and participants. The final presentation of an Art-based action research should be both artistic production and research reports, which will be made transparent to the general public, the art world, scientific community and community/stakeholders (Jokela & Huhmarniemi, 2018, pp. 16-20).

4.2 Utilization of the Art-based action research framework on the GEO design project

The utilization of Art-based action research in my work is forming the backbone framework for my chain of action, where I planned my research steps. The whole process is formed between my personal understanding development and discussions with my project supervisor, users and other artists/designers. The main study subject of my research was the GEO design project, with the main aim to find the benefits and challenges of implicating AVA research framework, thinking and process on a product-based project. The goal of the project itself was to emphasize the innovative delivery method for GEO-polymer material, which involves more social and business sectors as well as the users themselves.

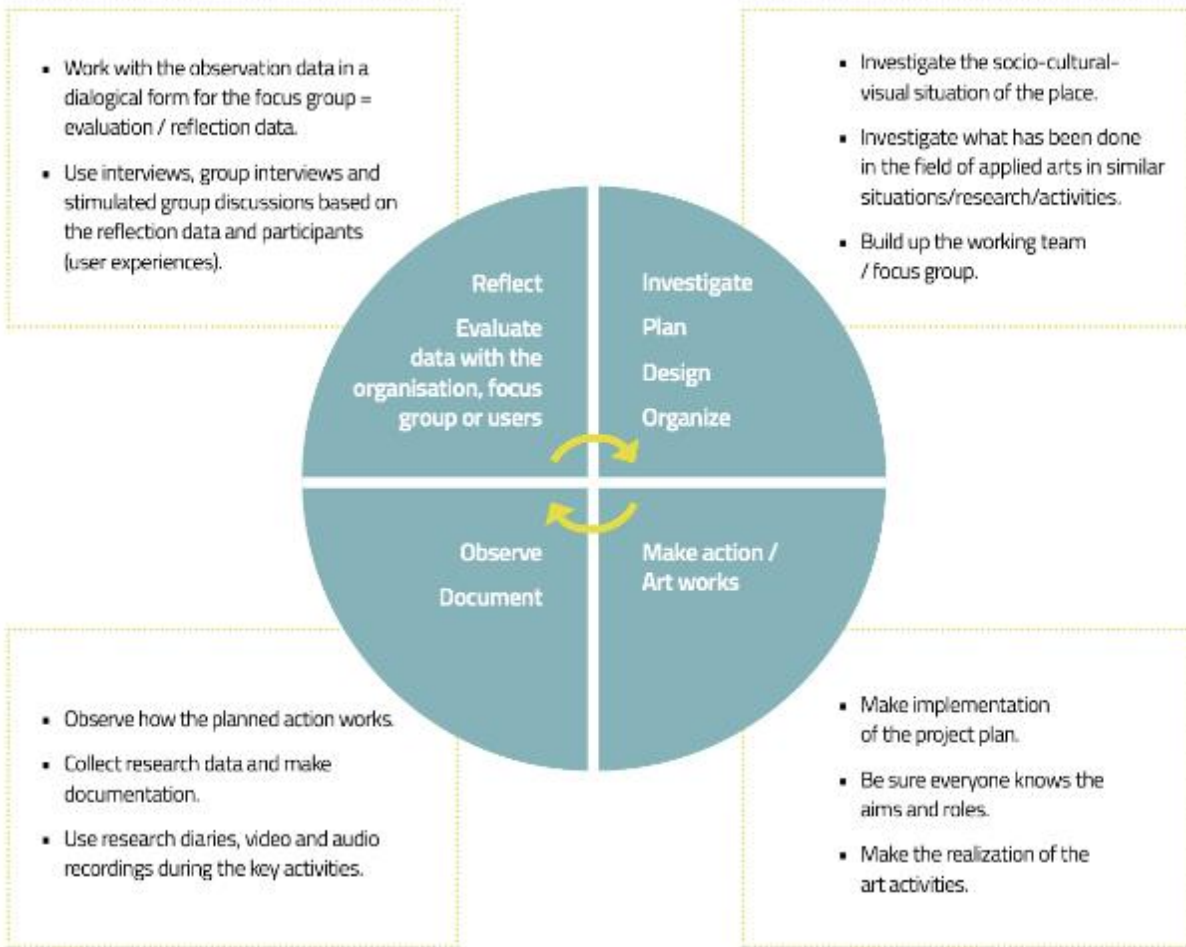


Image 7: Art-Based Action Research cycles described by Jokela (2018. p. 15).

STUDY OF THE BACKGROUND INFORMATION

In the first step of the project, I needed to familiarize myself with different levels of context, including the research process itself, the project goal, the material and what have been done in the previous correlation projects. My research was mostly based on literature review, where I found data through personal research and discussion with my project supervisor. The goal of this step is to prepare for myself background knowledge and context to establish a connection with the project and the environment and community theme, so that the next actions can be planned.

RESEARCH PROPOSITION QUESTIONS & OBJECTIVES

This second step theoretically belongs with the previous step, however, I felt that it is necessary in my case to divide them into two steps. At this stage, I had already known what my task was in the project and needed to figure out my own research question and my roles based on literature review. The challenging part of this step was to define my objective; however, it was still early for me to understand the context clearly and the aim of AVA as whole so as to apply the framework on constructing my own research. Besides giving a theoretical proposal for the next steps, I was guided by my supervisor, who is also a project partner, to focus on the material's background and aim at exploring its opportunities to be used not only in this project. The objective of my research in this step is tied to the material and the GEO design project itself.

DISCUSSIONS, PRODUCT TEST & DOCUMENTATIONS

Together with studying about the material and context, I discussed with my supervisor on how to plan for the future step as well as joined her in the product testing session. We received sample ingredients from the University of Oulu laboratory and worked on making decorative objects using a casting method with silicone mold. The objective of this step is to gain understanding on the material's characteristics and its possibilities to be produced and delivered. Documentations helped with visualization for other steps to show the textures and appearance of how the material should look and feel like as a product.

At this point, I was also introduced to the collaboration with the Elderly Home, where we would use the material for their renovation plan. The collaboration required actual product plan and visualization, as well as, narrowed the target users to a smaller group with their own specific needs and expectations. From this advanced move of the project, the research objective was directed into how to demonstrate the material's usability for this specific group of users. The plan for a participatory session was initiated to understand users' context and expectations.



Image 8: Material evaluating and testing session, self-taken photo (2017).

VISUALIZATION (DRAFT)

After experimenting with the material, I needed to gather all theoretical knowledge to form my first visualization.

PARTICIPATORY SESSION (1ST)

Before this participatory session, I discussed with my project supervisor to decide what features we will implement in the renovation project. I wanted to recreate a piece of furniture that is casual and can relate people with the feeling of home. Thus, we needed to figure out which items were essential in a common household and my supervisor suggested the fireplace. In the Nordic context, before the common use of the heating system, the fireplace was the centerpiece of a house, where all everyday living actions happened around

it. It was an ideal subject for this project, since most elderly residents there had been through that period of time and the fireplace could bring memory's value to them.

I had researched to define the shapes and key points in decorating the fireplace in my sketches. The idea was appreciated by participants during the participatory session, and they were engaged to share their own expectations and preferences about the fireplace. These were valuable data for my next step in the research.

REVIEWS & VISUALIZATION (2ND DRAFT)

My role in this step was shifted back to a designer. I utilized the users' response to implement my sketches and develop new design's ideas accordingly. The users' data reflected the missing info I had during my own research and directed my process closer to a fluid communication with the users. The data documenting process was quite not as fluent, since most discussions were in Finnish. I needed help from my supervisor for the transcript and translation, in order to be able to analyze these responses. The outcome, however, was more than I expected. The feedback was very valuable and straightforwardly contributed to the design plan, in terms of functionality or emotional aspect.

PARTICIPATORY SESSION (2ND)

This step was an essential part to finalize the fireplace. The objective of this session is to gather fresh ideas from other artists/designers, whose approaches are visual and practical. I planned the session with other students of the AVA program in the University of Lapland, who have adequate professional experiences and are familiar with this research method. The results of this session were used in the final visualization.

REVIEWS & FINAL VISUALIZATION

This step was just to apply the ideas from the participatory sessions to the final design. The final of the fireplace will then be documented for the second part of the project.

DOCUMENTATIONS, EVALUATION, REFLECTION & REPORTS

This part was an important part of the process. I needed to combine all documentations from the previous steps to form a framework of my own process. In this step, it was important that all the notes, sketches, transcripts, photos, visualizations from other steps were carefully maintained, so that they formed a foundation for me as a researcher to re-evaluate my own process. The evaluation process may take a long time for combining all data from different sources and participatory sessions to form a framework. The objective of this evaluation is to define the objective and research questions of each part and how did the actions align to those questions. Also, I needed to reflect on how completed the process was and what I could have done to have a better result. Fortunately, in this research, most of the steps were executed smoothly. Even though there were challenges, they all had been dealt with and the continuity within the project was preserved.

In the project reports, I presented the photos and data collected and the visualizations and material research would be used in the second part of the project, where the building process of the fireplace takes place. Generally speaking, I have completed the research goal for the GEO design, which was to research and create visualizations of the usability of GEOPolymer and to apply this understanding in the renovation project in the Elderly Home. Based on these understanding and experiences of the whole research process, I have conducted my research framework to answer the big research question "How can the process in AVA affect the creative journey and values of design, product design in particular?" My findings on this question will be written in the "realization of the research".

5 REALIZATION OF THE RESEARCH

5.1 Mapping the AVA practices to core values of product design

In the TEDx Talks presentation about “How product design can change the world”, the idea about the meaning of a product revealed to be more than just to perform a specific function “a product can be more than just perform a function and look a certain way. They can offer us a new perspective on how we see the world. And, they can connect us to a bigger reality.” (Maats, 2016). There are three main dimensions of how a product creates its connection to its users. The first dimension apparently was the Utilitarian Function, which was what the product does and how it does that. The second dimension was the Emotional Attitude, which elucidated how users' first impression on the product's look. Then, the third dimension mentioned was the Cultural Style, which was a more subjective correlation to each user's identity. The presentation established a system to define a well-designed product as a product that can communicate and create connection with users on those three dimensions (Maats, 2016).

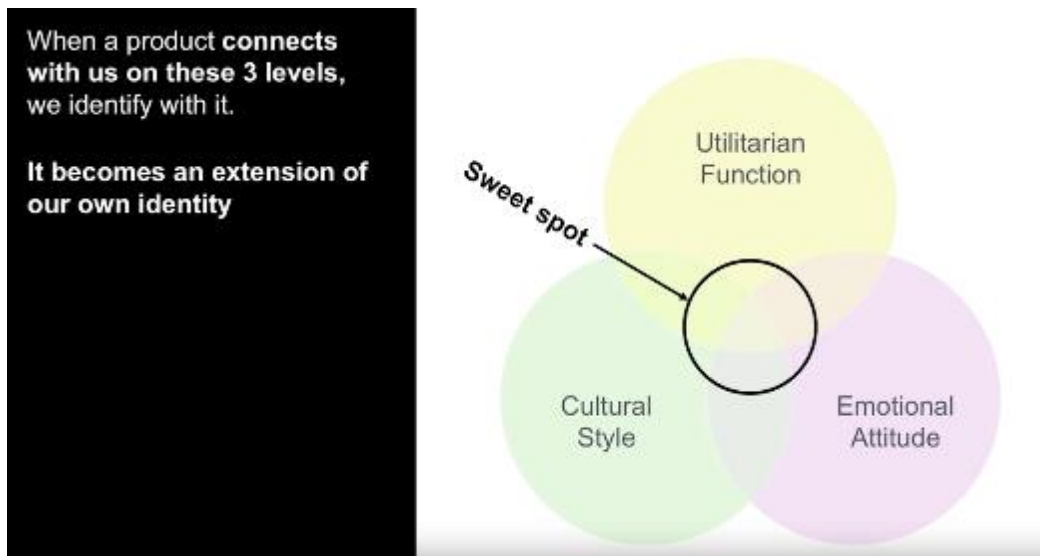


Image 9: The three communicative dimensions of a product, presented by Maats (2016).

In my research through the GEO design Project, the practices of AVA on the designing process can assure that a product satisfies this condition. In order for the end product to directly

communicate to its users, the user's engagement sessions are important. Through the participatory session I had arranged with the residents at the Rovaniemi Elderly Home, there are valuable inputs from the participants, which could not be collected elsewhere. The inputs guaranteed that the creative process would be directed into the "sweet spot" between the three dimensions of product design, where not only the designers define their subjective ideas, but also the users identify their style and expectation. Hence, the focus of AVA practices on user's engagement can improve the communication between the final product and its users by preparing and implementing it throughout the process. Before the participatory session at the Elderly Home, I did a lot of product design's research based on my main ideas about what to consider in creating functional value for the Elder, which belong to the Utilitarian layer of the product.

My main goal at that time was only to create a product that works well for the target users. Then, after discussing with my project supervisor, we decided to concentrate on designing a decorative fireplace, which is called "piisi" in Finnish from the past. From the Finnish cultural aspect, the fireplace is an important part of the house, where in the ancient time most living activities happen around. It was used not only to contain fire, but also to cook and to be a place for gathering. The research continued on how different the Finnish "piisi" would be compared to other fireplaces, which will define the suitable look to the local perspective and aesthetic. I had been recommended a Finnish book on the history of fireplaces through different periods of time. The goal of this process is to match the designed product with users' Cultural style and Emotional value. Subconsciously, I was trying to find the "sweet spot" of the three dimensions of product design.

As we discussed, my project supervisor and I found the common structure of the traditional Finnish fireplaces.



Image 10: Photo reference of a fireplace with traditional style (Fifty Degrees North). Based on my supervisor's Finnish background and perspective, this fireplace's shape and size may resemble the traditional fireplace. I used the images collected to develop my own model of the fireplace that can be used for the project.

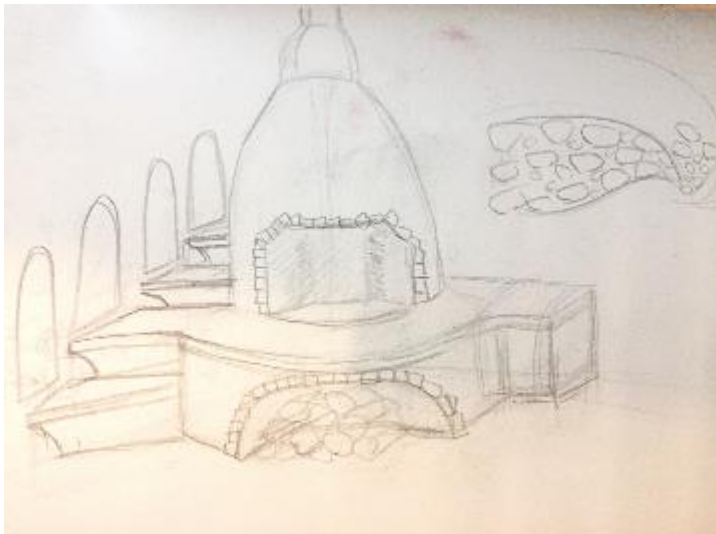


Image 11: My sketch on shape and form study

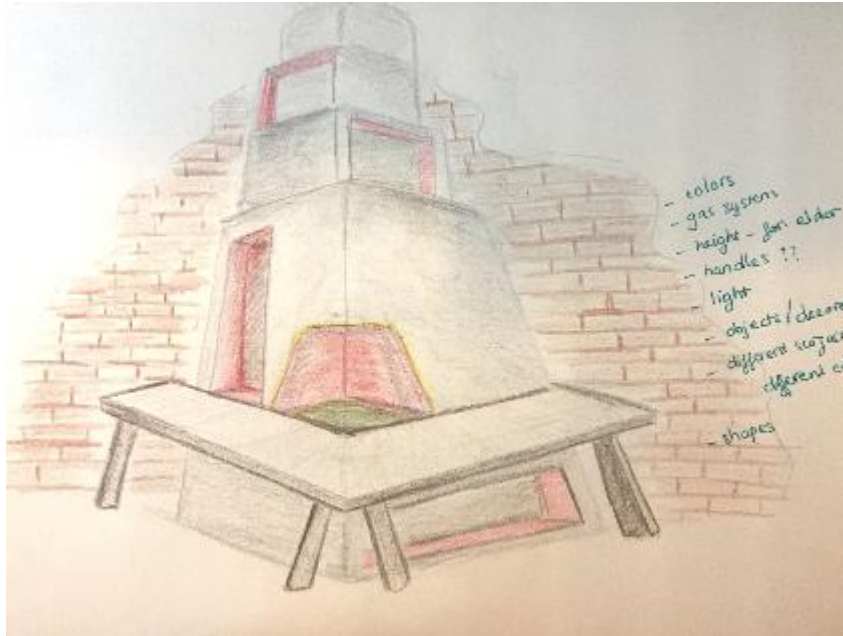


Image 12: My sketches and notes during research. I am not acquainted with technical drawing and product sketching, the sketch only helped me to visualize the shape of the fireplace and how the components can be arranged together.

We took the first user engagement meeting in the Elderly Home, where we gathered six long term residents and two workers there in a dialogue exchange session. The meeting went through with only conversations, regarding the physical wellbeing of the participants, whose ages were mostly around 60 to 80 years old. We explained our decor plan using the fireplace as the main decoration. The idea of having a fireplace did get appreciated by the audiences and gained great engagement. Then, the discussion moved to how the fireplace would look like and its expected functionality. The difference between users' responses and my expectations was surprisingly huge. Despite the whole research process that I had been through to counter all possible aspects of the product, users' inputs showed the other ways in approaching this art task. The session was quite successful in terms of process and result. While the project plan was well received by the audience, the session engaged users' interest enough to motivate them to express their ideas and expectations on the project outcome. The data collected through this session can be accounted as cultural dialogues based on users' experiences, memories and feelings, which is capable of contributing to develop and

adjust future usability of the product and establish a fluid communication between users and the designed product.

I had summarized the users' inputs and analyzed them in parallel with my hypothesis plan in order to see how much data a user engagement session can retrieve. There are four entities discussed in the user's engagement session to shape the appearance and functions of the fireplace. They are size, shape, decorative elements and additional parts. They are all included in my summarized table below.

Fireplace decoration plan breakdown.

	Hypothesis	Users' inputs
<p>SIZE</p> <p>-Expectation</p> <p>-Reason</p>	<p>-Big size to be in the center of the room</p> <p>-Main emphasis of the renovation, monumental object</p>	<p>-Small size to be in the corner of the room</p> <p>-Complimentary decor for gathering occasion, casual atmospheric object</p>
<p>SHAPE</p> <p>-Expectation</p> <p>-Reason</p>	<p>-Complex design, with 3 escalated levels and decorative niches</p> <p>-Provoke antique feeling and provide functional storage spaces</p>	<p>-Simple design, vertical rectangular shape with big open niche for the fire</p> <p>-Indulge idea of a "home" and provoke cozy feeling, relatable to normal household scenery</p>
<p>DECORATIONS</p> <p>-Expectation</p>	<p>-White is the primary color, pop color combination and decorative details such as decorative plates hanging</p>	<p>-Basic stone tiles with simple, but personal decoration details (not specifically indicated)</p>

-Reason	-Emphasize on enhancing visibility for elderly people by adding playful colors and details.	-Provoke nostalgic feeling of the past, more directly relatable, create direct connection to users' living experience
ADDITIONAL PARTS		
-Expectation	-Actual fireplace, with wood storage underneath, wooden bench	-Artificial fire with hidden internal space for the warming system, facility's own lounge chairs can be used
-Reason	-Seating/hangout place for a group of 2-3 people	-Comfortable gathering area for 10+ people, safety guideline for elderly people
NOTES		-Mobility of the fireplace can be considered for summer outdoor gathering

While my hypothesis plan was built based on theoretical solutions for the project, the users' inputs contribute invaluable realistic solutions based on living experiences, cultural background and personal expectations. This part of the process was a big milestone to cultivate the whole project's output, where the final design could create connections with the users in terms of functionality, emotional attitude and cultural style. It also provided a base for my further research and development in the project, since I had gained understanding on the users' contextual backgrounds and cultural perspective.

In addition to the three-dimensional theory of product design, there was one more dimension determining the success of a product experience, according to Maats (2016), the underlying dimension was the Belief/Purpose of a product. The new dimension explores a different aspect and can be a foundation to build a meaningful product. "Your belief system is how you see the world. It is the basis for the purpose of your actions." (Maats, 2016). It was explained that a meaningful product was one based on a belief system, which users could

associate with and its purpose could be empathized by not only the target users but also other people.

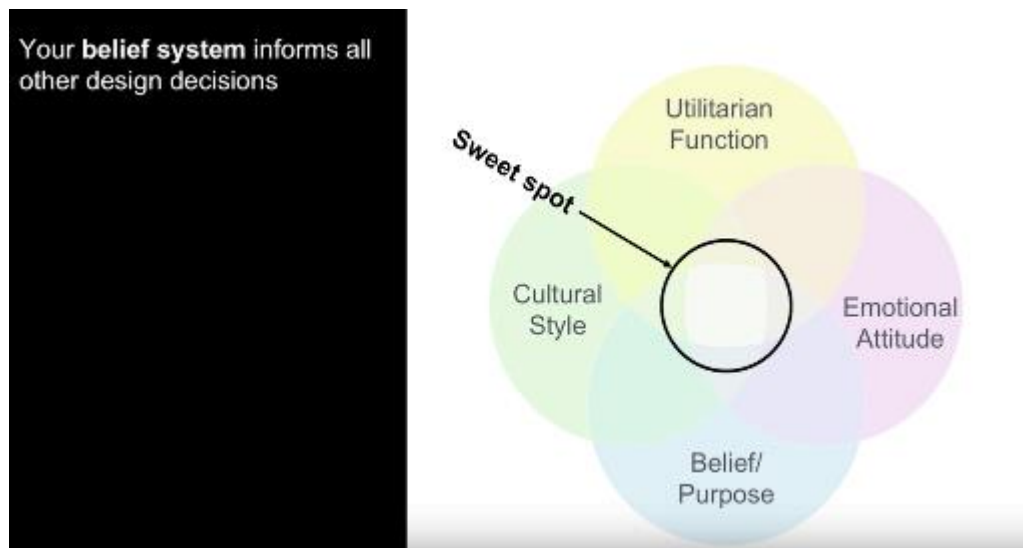


Image 13: The four communicative dimensions of a product, presented by Maats (2016)

The Belief/Purpose of a product, if it works correctly can be the big influence on other dimensions. Once the users can identify themselves with a product's purpose and belief system, they will be prompted to be engaged, to claim the identity and to support the production. So, how can the AVA process contribute to the Belief/Purpose of a product, which means to encourage users to believe in the product's purpose? As in the GEO-design project, the product started off with the initial main purpose to gain the interest of users and small manufacturers in the new sustainable material. AVA process created a framework for theoretical understandings on the subject and supporting concepts for the Belief/Purpose value of the product. By concentrating on the main purpose, the project had a clearer approach plan to achieve other dimensions. The main action in this project was to make the right question and find the right answer for each step is not only theoretical research but action based, and as the project progressed, there were more actions anticipated to construct a concrete result. The 4 dimensions of a product would also be created during the process. I made a diagram to illustrate this idea. The diagram does not show what had been done between the steps, but only demonstrates the relationship between a research question and its answers and the answers were questioned to generate other answers. As in the diagram,

the first subject started with the project itself, and the first question was about contextual understandings on this subject. Then, as I moved forward with other questions and answers, I found the main Belief/Purpose of the main commercializing product (GEO-Polymer) and the usable products developed by it, which is the sustainable characteristic/sustainability. The main Belief/Purpose became a factor that influenced later research subjects and questions. After different processes, I continued developing understandings on the secondary product (the fireplace) by questioning and finding answers. Then, I could define the fireplace's value with all three dimensions including its utilitarian, cultural style and emotional attitude.

The final product's value, then can be used as a solid foundation for the project's next step. However, my participation in the project was only until this phase. Yet, the project provided a well-founded proof for me to map the implication of AVA's process on developing values for a designing product.

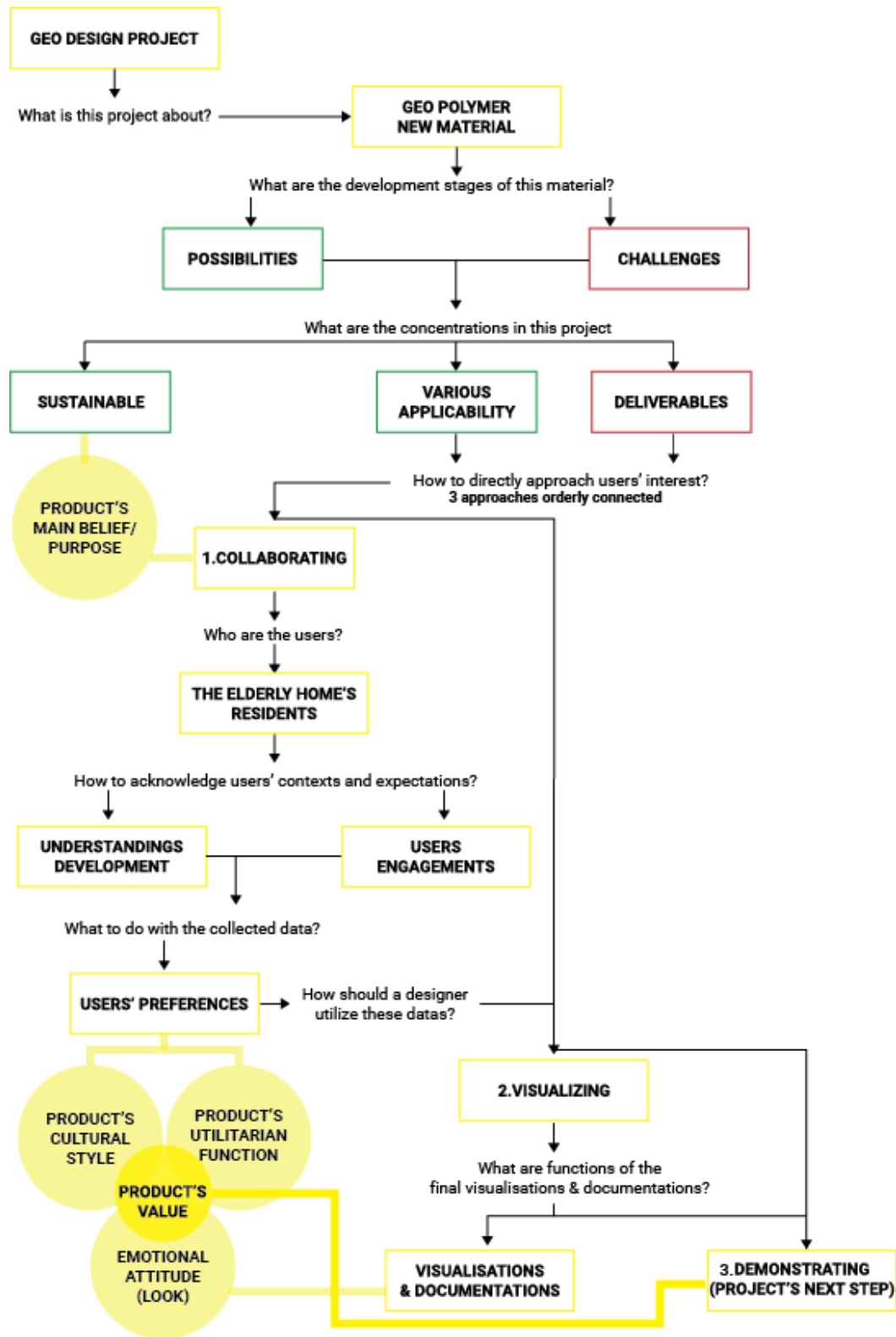


Image 14: My diagram showing the project development process based on research questions and solutions described (2018)

5.2 Mapping the role of designers to AVA

I had been wondering what my role as designer would situate in an art project or an art-based research. Since I started my AVA study, I have been involved in different art learning sessions and projects, in which conceptual thinking and process are practice driven and function oriented. Thus, after sometimes struggling to understand the framework and get used to the working methods, I found my design expertise is actually useful and compatible to work and learn within the framework. Based on what I have learned about users' context and preferences, I started to develop my sketches and study on the functionality and appearance of the product. I needed to employ the product's design thinking into the process. There are different factors to be considered, such as dimensions of the fireplace, its components and its mobility. In order to match users' preferences with the designated features, I analyzed the list of users' requirements and tried to match it with compatible features, which can be implemented in the final design. This connecting process allowed me to adopt my design thinking to analyze the collected inputs, breakdown the inputs into small problems and decide on solutions to deal with each single problem.

Requirements	Features
<ul style="list-style-type: none"> -Small size to be in the corner of the room -Simple design, vertical rectangular shape with big open niche for the fire 	<ul style="list-style-type: none"> -The final design will be in simple rectangular shape and attached to the corner of the room
<ul style="list-style-type: none"> -Basic stone tiles with simple, but personal decoration details (not specifically indicated) 	<ul style="list-style-type: none"> -Decoration can be made using precast GEOPolymer stone tiles. The tiles should be used as the main decorating emphasis for the outer of the fireplace, and inside of the fireplace belly.
<ul style="list-style-type: none"> -Artificial fire with hidden internal space 	<ul style="list-style-type: none"> -Modular design with parts that can be

<p>for the warming system, facility's own lounge chairs can be used.</p> <ul style="list-style-type: none"> -Safety guideline should be considered -Mobility of the fireplace can be considered for summer outdoor gathering 	<p>assembled or disassembled according users needs</p> <ul style="list-style-type: none"> -Portable (actual) fireplace to be stored inside the decorative part, which can be moved outside for summer used -Decorative cover of the fireplace to be placed in the room with lighting and heating system to increase sensibility
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In order to match users' requirements with the designed features, I needed to implement my first sketch and decide with a modular design for the fireplace. It is not conventional for a fireplace to be designed as pieces, but it is still feasible.

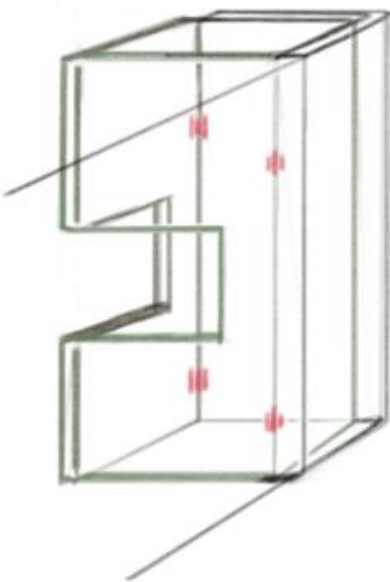


Image 15: My sketch study on the product's design

The sketch shows how the fireplace can be constructed with two wooden boards connecting. The space inside can be used to store the actual fireplace and be attached to the heating and lighting system. GEO Polymer can be used as decorative elements in this design. They can be hand casted as stone tiles and attached to the outer side of the wooden boards.

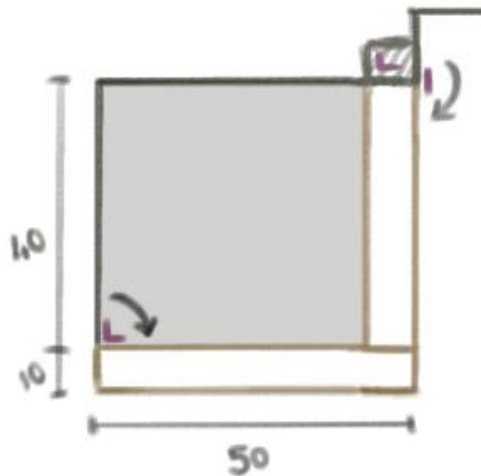


Image 16: My sketch study on the product's design. Top view study of how the boards can be attached to the wall and connect to each other. Dimensions were based on the real space.

After deciding on how the fireplace would function and be decorated, there was still a question on how the product can provoke feeling and personally connect to users. At this point, I decided to have the second participatory design session with other Master art and design students in the University of Lapland, AVA division. I felt this step was necessary, since ideas sharing within the creative circle is important to evaluate and add details to the final design. The session objective was to find the solutions to visualize the way the final product can connect to users emotionally. I chose this group of participants because they were artists/designers, who were able to solve the decorative problem within the time scale of one participatory session. Their thinking and skills would contribute effectively to the stage I was in the project. "When a designer starts working, he knows in advance what he's tasked to achieve. He's driven by an objective, a plan, a client, a contract. The artist's driver is imagination" (Byrd, n.d.). In this participatory session, my role was a facilitator, who gave participants a design solution to be solved. The main approaches to be used in this session were discussion, sketching, visualizing and presenting. The outcome of the session was straightforward to solve my initial question and contributed to the final design in both functional and aesthetic aspects.

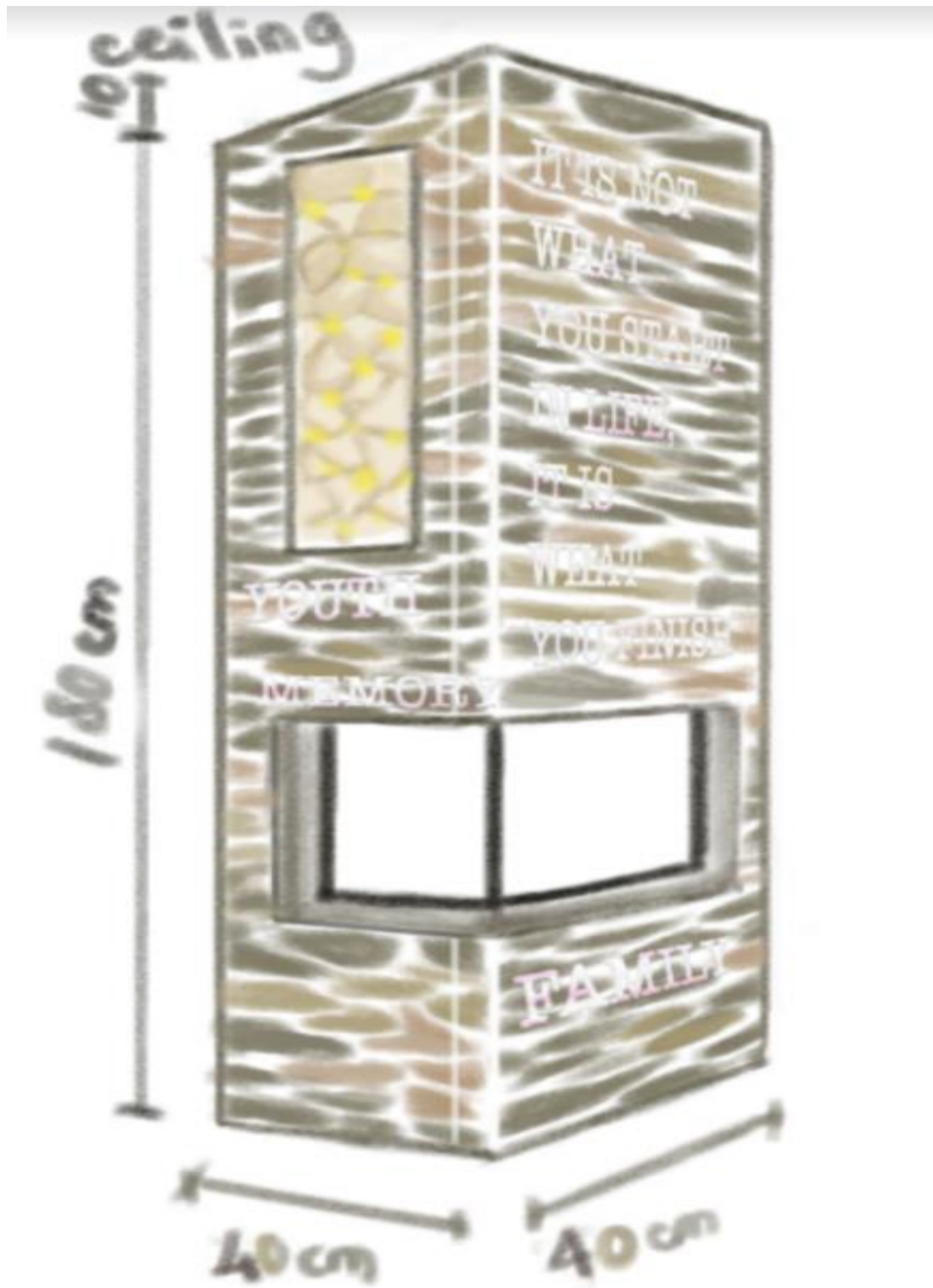


Image 17: My final visualization of outer design of the fireplace (2018). From the participatory session, there were two solutions I considered to be suitable for the fireplace, which were embedded texts and decorative logs with led lights. The two decorative ideas responded to users' expectation of feeling provoking. The texts should later be collected from users to express their own feelings and thoughts, which can be kept and visually displayed.

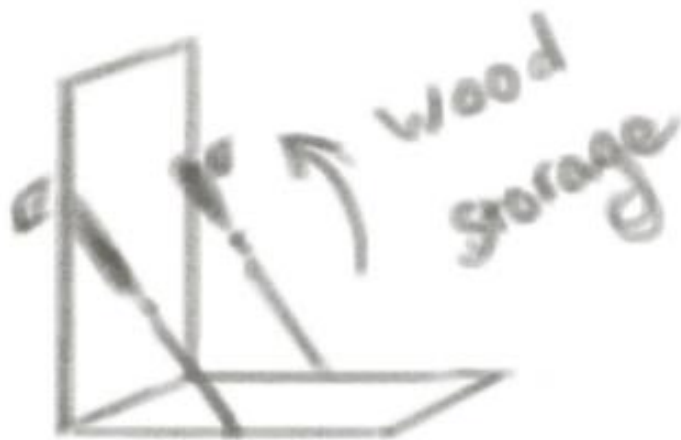


Image 18: My final visualization of the inner fireplace with glass doors and wheels to add mobility to the product.

The skill set of a designer is a valuable contribution to an AVA project both while working alone or as a group. Designers are effective in analyzing inputs, transferring them to visualization and solving problems with practical solutions. Thus, they can enhance the practical aspect of a project and accelerate the execution stage while respecting the themes and aesthetic ideas of other project partners.

5.3 Mapping AVA to sustainable aspect

One of the most significant values that AVA practices can add to the product design process is the sustainable aspect. AVA's main themes are not based on art styles, types of art or self-expressions, but circulating around Environment, Community and Education, which always require implementation and continuity.

The main aim of AVA is to respond to socio-cultural issues and contribute to a sustainable development. All projects in AVA, despite differences in methods, approaches or subjects, remain under the themes of sustainability. In order to understand the cultural or social sustainability themes, the researchers need to develop their own understandings on cultural and social contexts of the place that the projects are being developed. These understandings are important for future communications with local communities and improve the flexibility of the projects. Thus, the projects can be adjusted each step to adapt to the surrounding cultural and social environment.

While applying the AVA thinking on the product design process, the concentration shifts from building an optimal product to strengthening both the understanding level between the product and designers, and the communication between the product and its users. This change can positively affect the design's journey and direct it to a more sustainable development. The product developed within the AVA process requires a longer researching and planning time. In order to understand and explore all possibilities of a product, a designer can go to full length in research from theoretical contexts to product testing. This action ensures the functionality and feasibility aspects of the product, since the process was carefully planned and observed by the designers themselves. The context research and users' validations, meanwhile, ensures that the product design process will always follow and adapt to users' expectations and preferences.



Image 19: My photo of the product testing session, 2017. Silicone mold was created for casting GEopolymer.

This session emphasized the importance of a designer's observation over the product testing process in particular, and throughout other processes within the research range in general. By involving more in other parts of a project development process, a designer can collect more valuable data for the final design compared to just learning about the product requirements through consumer report or product brief. The testing session of creating a GEopolymer decorative object confirmed the challenges this material had been facing. The designed product was a feasible way to deliver the material to users. In that project, sizes of the final product were considered, since we had not yet found a way to cast bigger samples of the material. The note from this session was also used in the final design of the fireplace, where materials can be casted in small pieces of stone tiles and later attach together instead of being created as a whole piece.



Image 20: My photo of the product testing session, 2018. There were different colors, shapes and textures of the GEopolymer samples.

The samples of GEopolymer were tested in different shapes, forms and textures in order to support my research about its applicability. The results emphasized on the fact that GEopolymer was a flexible material and also demonstrated the possible production process using this material. Through this session, I also noticed that the material was quite lightweight and versatile, so it can be used to create different pieces of one product. I used this knowledge to support my ideas in the finalization of the fireplace, in which the material was to be used to create stone tiles and attach to the outer decorative part of the fireplace.

5.4 Mapping the challenges of applying AVA practices and introduce them to the audience

Since AVA is too new of an approach in art, it cannot be denied that there are challenges for both art practitioners and the audiences/users/participants involved in the process.

As a researcher and an art practitioner throughout this whole research process about AVA, using the GEO design Project as the primary study subject, I had constantly struggled to define and isolate the main objectives of the research and the project itself. The first difficulty for a new beginner, such as I am, in starting an AVA project is that it is hard to concentrate on the initial objectives, as in the objectives are clear from the beginning. It is true that AVA approaches are meant to be implemented and re-adjusted along the process, but for practitioners from other than art-research backgrounds, the understanding and planning steps are too abstract to begin with. For example in my case, when I first started with the GEO design Project, I needed to spend a lot of time doing different levels of research from researching about the material itself and about the whole project's background, about the other AVA projects, etc. to researching about how to plan a research process. My background as a graphic designer was not helpful in this case, it even confused me more in identifying what are the project goals and planning the roadmap for accomplishing those goals. The GEO design Project was a huge project with different objectives for each phase, so it required art practitioners involved to have a profound background knowledge, not only in one specific field. Thus, I attempted to define my role in the research chain, with a graphic design background, as an envisioned, who would use my visualizing skill to document and create the viable outcome of this experimental product. Yet, my expectation of the workload and approaches was totally different from the realistic requirements. The role of an AVA practitioner can be more complex and requires flexibility. This contemporary art type prompts art makers to involve themselves in a production process that includes a variety of creative approaches and flexible viewpoints. Though, there was one question I used to wonder at the beginning of my research that needs to be addressed, maybe also questioned by my fellow graphic designers.

Do senior artists/designers, with all their years of experiences have to go through the complicated process of researching, engaging and collecting data to solve a single problem, which may be already familiar to them?

While in product design, the process simplified in one phrase as “empathic immersion” is not only significant but also inevitable, AVA practices construct a more convoluted framework. The art practitioner does not only use his/her existing background and experience, but also needs to acquire new information, knowledge and techniques. Besides, the newest and the most abstract objective, AVA practices can add to a design process is to change the role of a designer from passively gathering data to actively planning, organizing and documenting the process. In this case, the value of a product does not rely solely on the outcome of its production process, but more on how the process was conducted.

It is necessary for any art practitioner to start their research from obtaining required theoretical contexts. Since each research project has different context, aim and methods, it is not possible to apply one approach on different projects. When the art practitioners take part in different AVA projects or several parts of the same project, everything does not revolve around their background, professions, experiences or personal perception, but concentrate on the main theme and research subject. Even with the experiences in their own field, it is essential to build the research framework and theoretical understandings about the subject matter based on adopting related knowledge. I had struggled at the beginning of my research because I did not know how to put aside my subjective ideas and a designer's method of working. I was trying to approach the research using my regular methods in design, which was systematic and not flexible. AVA offers a wider and open point of view to solving problems, in which the art practitioner needs to be in a neutral position to perceive new information and willing to adopt new methods and change the style of working.

Beside the need to adapt a new working framework, there are also cultural barriers as a foreign art practitioner collaborating with the local communities. Language was the main problem for me to do the theoretical research and communicate with the local community. An international language like English can only be used at schools where students and professors are fluent, but in order to communicate with local communities, English is not the

optimal option. Under the theme of communal culture, language is even more important. As I did my research on style and cultural preferences, I would be able to connect to deeper layers of context if I could understand the local language. I did not realize this issue until the first participatory design session, where all participants speak Finnish. That experience was quite overwhelming for me as a facilitator, since it was not possible to manage the session without the help from my supervisor. The notes from that session also required translation and indirect deliverable from my supervisor. Even though the research and participatory parts went through fluidly with valuable notes and data, I still think that if I was able to communicate with the local participants in their own languages the results can be improved.

6 DISCUSSIONS

6.1 Possibilities for the growth of AVA outside of the North Finland region

The collaboration between AVA concept and the core values of Product design can create endless possibilities for the growth of AVA outside of the creative environment in the North Finland region. Using environment and culture as the themes for project development is an essential growth for all parts of the world. The projects can be varied in terms of approaches, methods, subject matters, contexts, etc., and it is already known that sustainable developments should be the main theme. However, without a framework and lack of applicability, it is hard to imply the idea of sustainability in project development, especially in the art and design areas. AVA with its research context does not only respond to solving cultural, social and regional development problems, but also establishes its own framework. This framework is flexible and practical to be utilized in art and design projects to promote a more sustainable development. "Design is attractive to management because it is a de-politicized version of the well-known socio-cultural critique of managerial practices" (Kimbell, 2010. p. 293). The understanding of design contexts should be established on the basis of cultural and socio-psycho dialogues, which are supported by AVA framework. The importance of cultural and socio-psycho understandings is highly valued, especially in the modern society, where cultural identities are blurred by internationalization and industrial

production. As AVA is considered to be a sustainable solution to deal with these issues in the North region of Finland, its possibility to be applied in other parts of the world should be considered. "Place-specific and social works of art have a long-term impact on the location and community in which they are created" (Huhmarniemi, 2013. p. 50). Thus, as long as we can apply the framework to address specific problems in a location and community, we can develop the "place-specific and social works of art" to emphasize on the change to a more sustainable regional development.

6.2 Possibilities for AVA in developing and improving design's journey

The Art-based action research framework can be utilized to develop a personal journey, where the art practitioner or in a more specific way, the designer creates his/her own plan in understanding the product's context and establishing their own connection to it. The framework allows designers to be more active in studying the product's background and context, instead of only receiving information from project partners. While the sustainable aspect of AVA is undeniable, its benefits in customizing one's own journey should also be highly valued. The designers can decide their own methods and approaches for learning about the products, while improvising on the existing framework that AVA offers. The improvement in design's journey should not be difficult to achieve, since it is quite similar to the existing user-centric design process. Rather than focusing on the designer's experiences and subjective ideas, the new framework concentrates more on the users. What are their backgrounds? What are their expectations? By understanding their preferences, the design's journey can have a more direct approach to create the final product. The utilization of the participatory method is useful for approaching users, although there is no need to directly ask them what they need. The participatory method can involve users in different art making sessions, to analyze users based on the results and data collected. Communication using art as a tool can engage people to be more creative, and to share their experiences and preferences throughout the process of making art, thus, it is more fluid and can achieve better results. While engaging people in the participatory session, the designers can earn the

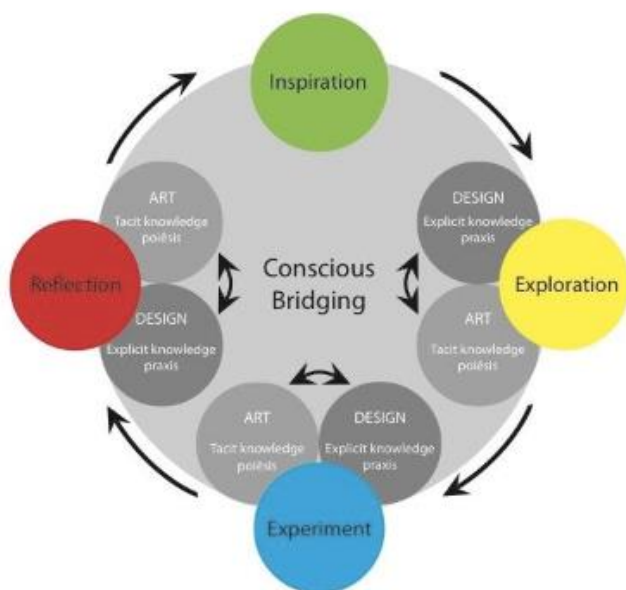
opportunity to understand users, thus improving their designs to be more user centric and well connected with users, rather than just emphasizing on function and aesthetic.

The changes in the role of designers in the AVA framework can create a new trend of sustainable development in design. As designers can change to an active position in a project, they can improve the user centric characteristic of a design process, where all designs aim to put users in the center and development happens around users. This change in method can create a more sustainable environment for concept development, where there is more emphasis on the values of a product and its communication with users. Speaking of personal experience, the framework introduced a more effective and approachable way to understand users' contexts and preferences. It is easier to engage people into reflecting thoughts and sharing experiences by discussions or workshops, and it is more important to establish a sense of ownership, where users participate in the process and feel the direct connection to a product or service.

6.3 The need for art education

“Everybody is the creative type”. it is believed that creativity exists outside of the conventional creative areas (Kelley & Kelley, 2013. p. 10). “the ability to come up with new ideas and the courage to try them out” was defined as creative confidence (Kelley & Kelley, 2013. p. 10). People may or may not need guidance to discover their ability to generate ideas, however only those who act on their ideas would truly understand the real value of creativity . The creative confidence, which leads to creativity in diverse backgrounds, is “a natural part of human thinking and behavior” and the need to unblock that “creative spark” inside each person is significant (Kelley & Kelley, 2013. p. 11). The question here is how to ignite that spark, and there are endless answers to this presumably abstract question. The practices of art have been proved to be capable of opening the creative door within a human's mind. Creativity has always been the main object in Art and Education, along with “problem solving and encouraging alternative ways of seeing and making sense of the world” (Coutts, 2013. p. 24). Creativity in AVA does not only mean self-expression or artistic creation, but

also responds to environmental, social and cultural problems. Art education in AVA, instead of teaching fine arts for exhibition or , the main aim of this new discipline is to build a framework for artists/designers to utilize their creativity to develop research or contribute to project developments. Theoretical learning and researching are also important in this framework. Though the concept of art education and learning is not a new approach and it is always been questioned by the students. "The relationship of current art to theory can be a source of consternation, especially for those who are relative newcomers to the field. Artists-and students studying studio art-often wonder, "Why do I need to know about theory? Can't I just make my art, and doesn't it mean what is visibly there, without the need for explanation?" (Robertson & McDaniel, 2012. p. 25). In AVA, the most important task to start a project is not to learn about art, but to learn more about the socio-cultural background of the main subject and base on this understanding to establish the actions. If the context is not well understood it will be difficult to achieve an appropriate project plan. One should invest time in studying the theoretical framework both by self-learning or by art making. Thus, the need for art education is important, not only to inspire creativity but also to assist the art practitioners in their research steps.



Images 21: Conscious Bridging in Practice-led Research Process, described by Pinxit (2016. p. 56)

“Conscious bridging is the flow that enables a smooth transition between mental and cognitive thought states. It involves being cognizant of an overview of the research intent and the task at hand, as well as two distinctive (art and design) paths of action that need to occur and stepping between these states while merging them as a fluent process.” (Pinxit, 2016. p. 56). The diagram shows a simple cycle of learning and developing where art and design knowledge influence each other. The art practitioner learning process needs to start from inspiration, then exploration, experiment, reflection and then create an inspiration to start another cycle. His/her works can become the inspiration for his/her own next project or others project. The art practitioner may change from learning position to sharing experiences for others’ learning purposes and learning from sharing. The multidisciplinary environment in AVA creates an ideal learning environment where art and design knowledge and experiences are shared and learnt to achieve a more sustainable goal in project development.

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Image 8, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20: Self documented photos and diagrams

Image 9 & 13: Maats, C. (2016, October 4). *TEDx UniversityofGroningen: How product design can change the world* [Online Image]. Youtube. TEDx Talks.

https://www.youtube.com/watch?v=ZqeA_psKn2E