

Thesis

Incorporating environmental educational elements in adventure programs.

Case: Adventure House.

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**Bachelor's degree in Adventure and Outdoor Education
(210 ECTS)**

(11/2020)



**UNIVERSITY OF
APPLIED SCIENCES**

ABSTRACT

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Bachelor's degree in Adventure and Outdoor Education

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Title of thesis: Incorporating environmental educational elements in adventure programs.

Case: Adventure House.

Number of pages: 30 and 3 pages of appendices

Supervisor of the thesis: Anita Saaranen-Kauppinen

Commissioner of the thesis: City of Helsinki, Youth Division, Environmental Education Unit

The goal of this thesis was to examine the literature of environmental and adventure education to combine them as an activity for the commissioner Adventure House. Adventure House is working under the city of Helsinki's youth division. Adventure House offers adventure educational day activities for mainly secondary school groups. The need for his study rose when Adventure House went under the environmental division and became part of EcoCompass standards. Therefore the need came to be able to offer also environmental educational activities in the Adventure House.

The objective of this thesis was to develop environmental activities to be incorporated within the adventure program already done in the Adventure House. The development work was done using qualitative researched based method of interviews and community-based participatory development method of brainstorming. Four professionals of the field of environmental or/and adventure education were interviewed. Brainstorming was done with the commissioner. The analysis part was done using mind maps and transcripts from the interviews. Based on the interviews the most important finding was the importance of cooperation. Another important discovery was the theme for the activities, which was going to be climate change.

The final product developed for this thesis was three separate environmental educational activities with the theme of climate change. The activities were sea observation, solution factory and tale of an animal. They were developed using the results of the interviews and brainstorming as well as using the knowledge base. The results indicates that it is possible to combine environmental and adventure education together as a functioning activity.

Keywords: Environmental education, adventure education, youth work, grouping, climate change

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1 INTRODUCTION

1.1 Environmental education and youth work

The awareness of environmental education has become more visible within the years. Environmental education is the most important work in the world according to Sykli (2020) and thinking about it a while longer it becomes quite clear that without the world and the environment we are in, there is no us. Humans are part of the world as we know it but not a necessity to the world to function.

Today's youth is in a vital position for the future to lead the way of sustainable development. Youth and the future generations will be living with the environmental consequences for longer and learning sustainable habits from young age could make a difference in the earth's well-being. I will approach this topic from the viewpoint of youth work, adventure, and environmental education side.

This thesis's commissioner is Adventure House that work under the city of Helsinki's youth work division. They provide adventure educational programs for 7th to 9th grade's pupils that promote cooperation within the group. After contacting Adventure House for a thesis topic and they suggested two possible topics from which I chose to develop an environmental educational for them. The content of the development elements was determined by the interviews made and a final brainstorming session with the commissioner. The need for this type of project came from the organisation after being part of the EcoCompass certificate and including Adventure House under the environmental educational youth work unit.

1.2 Need, purpose, and goal

My topic is narrowed down to present environmental and adventure education as well as youth work and group development. The product of my thesis is to incorporate an environmental educational element within the already existing programs that are using adventure education for Adventure House in Helsinki. Even though my end product's theme will be climate change I will concentrate on the educational side and activities around it rather than the problems. The aim of the program is to increase environmental educational side in the program and increase awareness and nature reading skills for the target group.

Many theses have been made about environmental education mainly for the early childhood education with the perspectives of practises already in use and how it effects the nursery aged children. My purpose was to provide environmental educational program for older children in secondary school groups which has not been focused on before widely. Environment as a phenomenon itself is a huge topic that has been researched a lot from different areas of life from economical to social point of views. The importance of environmental education is recognised worldwide in multiple studies. It is imperative to see the connection and the dependency of environmental problems and educating people about it. Education is one of the most important ways to sustain life and improve the state of the world (Cantell 2004, 18).

The aims of this study were to:

1. Gather information on the need of environmental educational program by interviewing experts on the field.
2. Researching the literature on the topic.
3. Providing the Adventure House with three environmental educational elements withing their programs for youth.

1.3 Case Adventure House

Adventure house is working under the supervision of city of Helsinki's youth division that provides adventure educational activities for groups of children and youth. Adventure House uses Villa Bardoff in Kallahti, Helsinki which is surrounded by nature, next to the sea. In this 100-year-old house adventure programs are provided for groups as well as facilities, knowledge, and equipment to organise adventure programs for others as well. In the city of Helsinki's youth division are also other locations and the Adventure House is one of them. (Seikkailutalo 2020a.)

The goal of adventure educational activities is to provide positive experiences for the youth, promote feeling of community to strengthen individuals and their growth in self-confidence. Reflection moments are integral part of the activity. In these reflection moments the group discusses how the exercise was, what it felt like and what was learnt from the experiment. Primary target group are the school youth groups from Helsinki region specifically secondary school groups and secondary target group are the instructors of youth groups. The core processes of Adventure House are adventure educational group activities, renting facilities or equipment for adventure activities, renting facilities and equipment for other operations and training services for group instructors. (Seikkailutalo 2020a.)

The Adventure House hosts number of different kinds of activities. Main goal usually is increasing group functionality and cooperation within the group. In addition to the indoor and outdoor areas they have facilities to offer for example climbing, kayaking and dry suit floating in icy water. The groups usually come there for 3-4 hours of activities. The existing programs that the Adventure House is providing at the moment are all adventure education-based programs, therefore there was a need for environmental educational elements using adventure education as an addition to their programs already in use.

Adventure House is part of environmental education youth work unit which supports environment and nature education aiming to increase the knowledge and awareness of the youth. The goal is to create a close relationship between the nature and learn about the ways to interact for the nature and increase the awareness. It includes also ethical principles such as being able to function openly, independently, and democratically. (Seikkailutalo 2020b.)

Adventure House became a part of EcoCompass which sets standards of a business more environmentally friendly and sustainable with different areas of business. These areas are waste, procurement, material efficiency, energy, noise, subcontracting, logistics & transportation, and communication & influence. (Ekokompassi 2020.)

Youth services In Helsinki has made their own model about environmental education called the flower model. It has three pedals of environmental education: close relationship with the nature, action towards the nature and nature insight. The aim of the flower model is to educate about the nature and to create respect towards it within youth work. The respect is created through meaningful nature experiences and through recognition and action. It could be said that the flower model offers a holistic view of environmental education. Combing human connection, activities done for the nature and insights realising what could be done individually. (Kukkamalli 2020.)

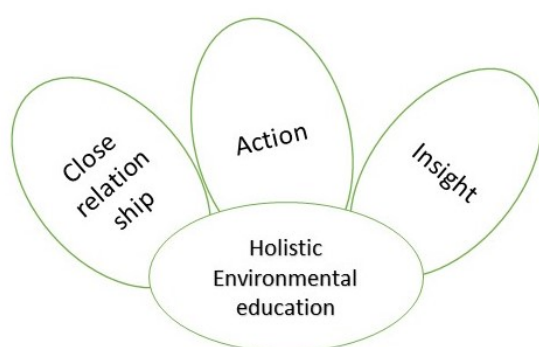


Figure 1: Visual adaptation of the Flower model (Kukkamalli 2020)

In the Fig. 1, the holistic environmental education covers all the three pedals of the flower. All of them are supporting each other, and it gives possibilities for the youth workers to enable approaches through action, experiences, and reflection about environmental education. (Kukkamalli 2020.)

2 CONCEPTUAL FRAMEWORK

2.1 Environmental education

Environmental education as a concept means according to FEE (Foundation of Environmental Education of Finland) to live life along the principles of sustainable development. Which then means living in a way that gives opportunities to satisfy the needs of future generations as well as the present moment demands. (Sarkkinen 2017.) To ensure the earth would be still providing a place to live for the multiple future generations to thrive it is important to for us to take action and responsibility of it today. The starting point is anthropocentric, knowledge is valuable but even more important is the action (Sarkkinen 2017).

Environmental education is not solely educating about the nature but also about cultural, social, economic, aesthetic, and aesthetic environment. In addition to gathering knowledge, environmental education also emphasizes personal experiences, meanings, and emotions. (Cantell 2004, 13.) The word education implies to a long term and continuous process that aims in life lasting change in behaviour that is beneficial to the environment (Salonen 2005, 204).

International goals for environmental education were set in conference in Tbilisi 1977 by UNESCO. The goals are still valid today. (Cantell 2004, 60.)

- Awareness – To get an awareness of the environment as a totality and become sensitive to its problems.
- Knowledge – Help gathering knowledge. Experiences aid to achieve and deepen the knowledge.
- Attitude – Clarifying attitudes and values towards the environment. Motivating to act upon the values to conservation of the nature.
- Skills – Help to attain skills to recognise and solve environmental issues.
- Participation – Offer opportunities to active and responsible work to solve environmental problems. (Cantell 2004, 60.)

There are many different ways environmental education could be done to mention a few: nature school, school/nature camps, nature nurseries and adventure services. The benefit of nature is immediate, it helps mental well-being, helps to relax, and feel refreshed. (Polvinen & Pihlajamaa & Berg 2012.) When children are exposed to nature early on, they might learn to respect it and behave more sustainably when they grow up.

Sustainability could be defined in many ways; one way describes the human society to be able to continue indefinitely. First the unsustainable ways in the society need to be recognised in order to understand the concept of sustainable development. (Iyer-Raniga & Andamon 2018.) Starting environmental education already at the nursery level creates a good basis for the youth in order to make changes in the long term and learn sustainable ways.

Climate change is a huge and complexed topic. There are many studies done about it and evidence found that most probably human activity has interviewed with the natures natural forces and started a rapid warming trend globally. Evidence to support this can be found from many places; globally temperature has been seen rising 1,14 degrees Celsius since the year 1800. The oceans have warmed 0,33 degrees Celsius since 1960s, the oceans absorb a lot of earth's energy from the sun. The ice sheets of Antarctica and Greenland are decreasing in their mass. Glaciers around the world are

retreating and the northern hemisphere is decreasing in snow cover within the past five decades. The sea level has risen 20 centimetres within the last century and the rise is accelerating slightly each year. The arctic sea ice has been declining in past several decades. Extreme weather events are becoming more frequent. Oceans acidification has increased by 30% since industrial evolution. Part of the carbon dioxide from the air is being absorbed into the ocean creating this problem. (Nasa 2020.)

In Finland this would mean milder winters, more rain, even though the growth season could get longer, the amount of pests could increase. The diversity of nature will diminish, and the waterways will become eutrophic, algae will create more problems. Winter without snow can bring more floods in the wintertime instead of spring. (Dahlgren 2003.)

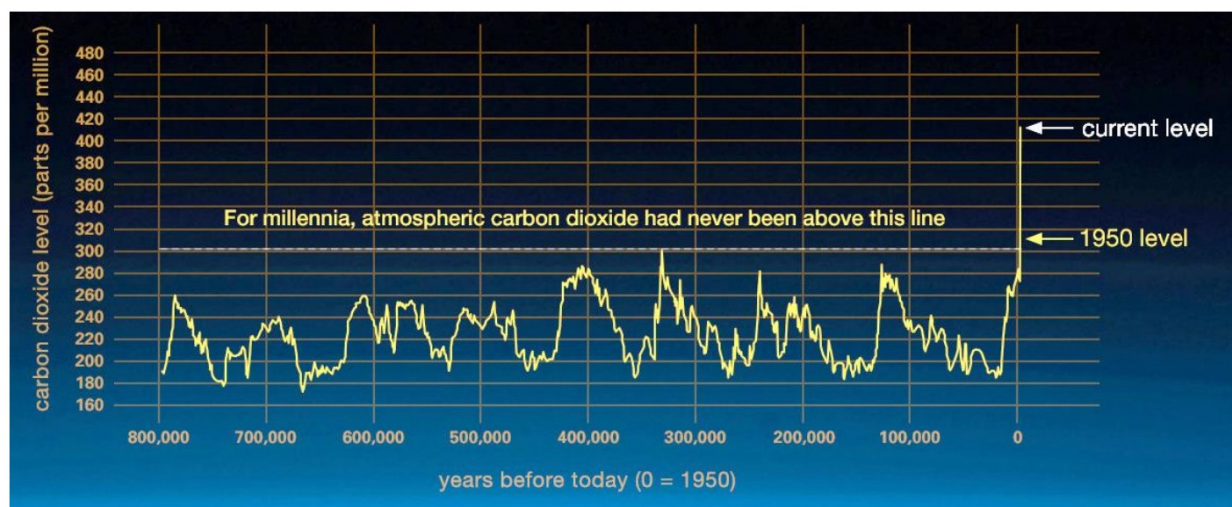


Figure 2: Earth's carbon dioxide level (Luthi, D., et al.. 2008; Etheridge, D.M., et al. 2010)

The figure 2 represents the carbon dioxide levels in the atmosphere from 800 000 years ago to 1950s. The measurements are based on ice core measures taken from glaciers in Antarctica, Greenland, and tropical mountain glaciers. (Ice core facility 2020.)

Carbon dioxide and other gases have a heat trapping nature which might conclude heating the planet (Nasa 2020).

For a moment let us examine the human behaviour and values towards the environment. One might think if a person values highly on environmental well-being the actions would be aligned with the values, but as humans it is not that simple. The behaviour towards environment can be quite illogical considering values. Even if a person would put environmental issues highest on the priority list of the values. There are studies done which then shows the actions are not following the values. In the western world people are relatively conscious about environment issues. Logically thinking people would act accordingly towards the issues for example famine, pollution, ozone layer disappearing and temperature rise in the world, but when it comes to action even the more aware persons might not want to decrease their living standards. The environmental issues in the world are often seen from far away somewhere else and the outcome is not directly visible that creates an opportunity to eliminate the psychological contradiction in the mind and therefore the behaviour will continue illogically. (Salonen 2005, 182-185.)

Regarding environmental concerns, the municipality of Helsinki has done questionnaires (RuutiBudjetti 2019) for the youth in the Helsinki region towards the attitudes and views about environment. The age distribution was from 12-25 years old with most of them 12-14 years old. 75% found the environmental matters very or extremely important. The issues that were considered most important were clutter free nature, slowing down the climate change and pollution free Baltic sea. The youth were ready to take action not to clutter the environment, sort out the waste and recycle and save electricity. Activities the youth would be willing to take part in were nature photography, adventure activities and art activities utilising the nature's material. The youth was also concerned about animal well-being and their rights.

2.2 Adventure education

There are many ways to define adventure education. For my thesis I will examine it from the point of view how the Adventure House uses adventure education. All their programs incorporate it within their activities and there is no such thing as only a game, it always has a deeper meaning and a purpose. According to Kivelä & Lempinen (2010) adventure education means facing a different variety of challenges from big to small that differs from normal day to day life safely. The dominant factors are challenge of the activity, experiences, and reflections. The activity should also be goal oriented, interactive with people and nature/surroundings and it should have an element of surprise. (Kivelä & Lempinen 2010.) Without the surprise element the activity is just a performance and not adventure education (Keskinen 2015, 21).



Figure 3: Kolb's experiential learning cycle (1984)

Experiential learning (Fig. 3.) goes in a continuous circle and it challenges to learn more in a more meaningful and rewarding way than conventional learning. It starts with an experience followed by reflection of the activity other ways to say it as reflective

observation. Then comes conceptualising which means to generate meanings and hypothesis of the experiences. In planning phase, the hypotheses are adopted followed by a new experience that either supports or challenges the hypotheses. Kolb's cycle is learning by doing and reflecting it regularly to adopt new and better ways to learn. (Keskinen 2015, 16; Kolb's learning cycle 2018.) Another point of view from experiential learning is from John Dewey who argues that experiences are accumulating from the past to influence the future ones. Therefore, expressing in such a different way depending on every person's individual experiences. (Karppinen 2019, 97.) In the element developed in this study experiential learning is present through reflection, learning by actually being outdoors, doing activities and acknowledging the nature. The past experiences might have an impact whether the experience is meaningful and educational.

Safety is a very important part of adventure education. It can be defined many ways this is one of them. Safe environment could be divided into three categories: physical safety, social safety, and mental safety. Even though all these aspects must be taken into account, it does not mean that every factor is strictly controlled, but there is a space for surprises, challenges and mistakes concerning learning. Physical safety entails the threat of physical injuries or accidents happening to the body. Not all physical stressors can be eliminated but with careful planning, preparation, and anticipation these factors can be minimised. Social safety is toward the group and the social interactions within. It is safe to express oneself, take part in conversations without the fear of getting embarrassed. Social safety could be built by choices supporting openness and trust in the group. Mental safety means the fear of unknown that can cause stress, anxiety, or tension. Mental distress can be caused if a person is put into situation where their own skills or feeling of being in control is compromised. (Lehtonen & Saaranen-Kauppinen 2020.)

Step by step approach can increase the sense of success and therefore increase the level of safety within the different areas. When planning an adventure educational program, it is good to keep in mind of the hard skills which encompasses technical skill and the soft skills which include people skills, leading and teaching. (Lehtonen & Saaranen-

Kauppinen 2020.) Example of hard skills could be rope work skills in climbing or handling the boat in kayaking. Example of soft skills could be how to interact socially with the group.

According to Panicucci (2007) there are three different zones where people are. The first zone is comfort zone where person feels at ease and everything in equilibrium. The second is stretch zone where interest arise and there can be some instability, learning happens in this zone. The last zone is panic zone where stress and adrenaline levels are high and new information is impossible to take in. Adventure Education aims to be in the stretch zone where the personal growth and leaning happens. (Panicucci 2007.) Activities such as kayaking and climbing require a safe learning environment when the aim is to learn various skills without a safe feeling in the above three categories learning becomes impossible. Feeling stressed or anxious are prohibiting to take in new information and learning.

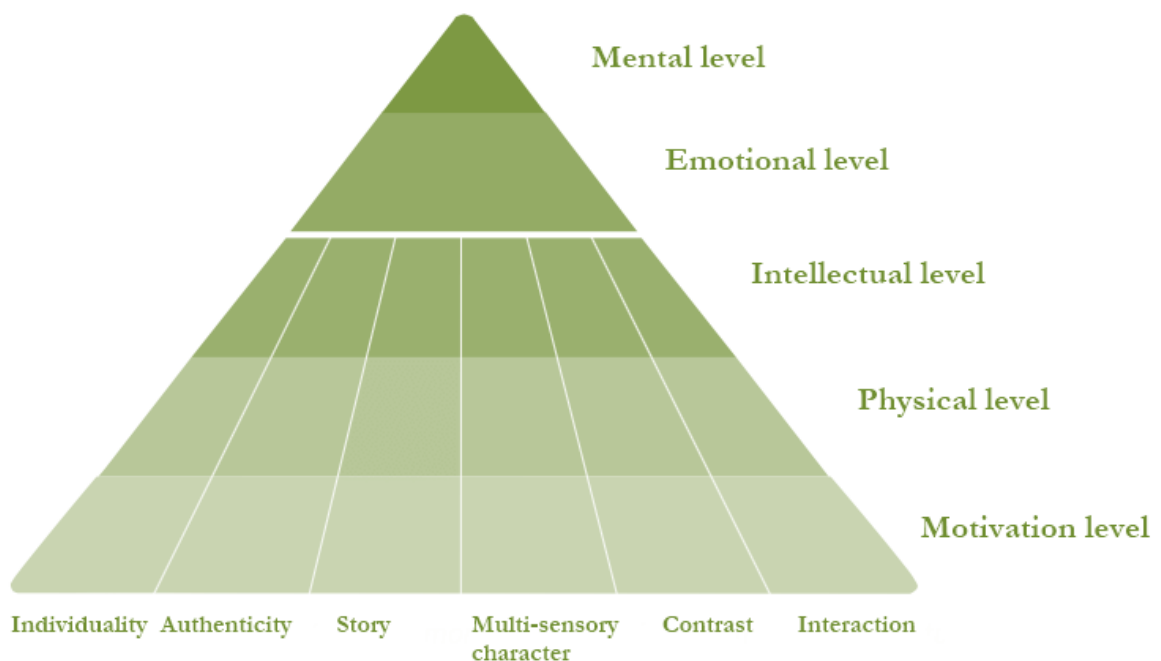


Figure 4: Experience pyramid (Tarssanen & Kylänen 2005)

In the Fig. 4, an experience pyramid is presented. It shows what is needed to make a personal transformation through a memorable experience. It represents an ideal service/product that would take into consideration all the aspects mentioned in the pyramid. The elements in the base of the pyramid are individuality, authenticity, story, multisensory character, contrast, and interaction. They are creating the experience. Individuality means that the experience is flexible according to personal needs for example by changing the challenge level. Authenticity is creditability of the activity and surroundings. The one deciding the authenticity is the person experiencing. Incorporating a story to the experience could trigger a person's intellectually and emotionally creating a stronger bond. Multisensory means the use of our five senses wisely, not overflowing the senses (sight, taste, smell, touch, and hearing). Contrast means that the activity is different from day-to-day life. It is something new, something deviant. Lastly the interaction means to be able to create a sense of community and togetherness with the group. (Tarssanen & Kylänen 2009, 11-14.)

The levels of experience are rising on the right side of the pyramid. They are motivation, physical, intellectual, emotional, and mental levels. Motivational level wakes the interests of the activity and creates some expectations. Physical level is all the person is experiencing through physical senses and the sense of security. The technical quality is measured in the physical level. The intellectual level is for processing the experience possibility for learning new skills or developing, forming opinions, and deciding whether the experience was satisfactory. Emotional level triggers emotional happiness, success, joy of learning and the meaningfulness of the experience. Mental level can create a personal change if the experience has triggered a strong emotional reaction. A person can find new values and resources from himself/herself through experiences. (Tarssanen & Kylänen 2009, 15-16.)

The experience pyramid model is mostly used in experience industry for example in tourism. I feel it could also fit in to adventure education just from a bit different point of view. From the elements all of them could be seen from adventure educational side to increase the chance of a life changing realisation and change in behaviour. Incorpor-

rating environment educational elements from individuality to interaction could potentially have a better chance to change behaviour utilizing the experience pyramid model.

Adventure education can often be found as a subcategory in the environmental education handbooks. Environmental education is considered to be part of adventure education. (Polvinen et al. 2012.) Adventure and environmental education often both go hand in hand. Adventure education is more of how to do activities and environmental education is wider area of passing on information with a long-term goal of behavioural change.

2.3 Youth work

The goal of youth work is that every young person would feel that their life is meaningful, they are part of a society and could claim their place according to their vision of the world. Youth work is also genuine encounters with the youth increasing their well-being and doing activities together. Guiding the youth to learn from mistakes, solve conflicts and to take down prejudices and attitudes. (Allianssi 2020). It is an educational process that focuses on the activities outside school hours (Kiilakoski 2015, 4).

Youth work could be done in many ways: communal youth work concentrates the work in the youth's near habitat in order to increase the living conditions. Civil youth work gathers information, develops, and takes part in a conversation about youth in a national level. Participatory engagement in youth work increases the chances to get youth's voices heard in different channels of influence for example in municipalities or in their habitat and increase the ability for the youth to be an active citizen. Cultural youth work brings the youth's voices and opinions through art and culture. Targeted youth work is done in small teams or individually to support the personal growth and connect with the society. (Kiilakoski 2015, 3.)

Sustainability is also present in youth work with the work principles and work methods using ecological options and encouraging the youth to think about their own choices towards the environment. (Allianssi 2020.) All activities that are done in the Adventure House are youth work especially group orientated work done in the communal area of Helsinki.

Participation could be seen in different points of views from personal side reaching from communal side to society side. Personal participation includes feeling of empowerment, individual's identity, and the ability in own life management. Communal side enables the sense of solidarity, security and justice in the surrounding community and society. Society side means how an individual might have a possibility to take part in decisions in a larger scale. (Jämsén & Pyykkönen 2014, 9.) In the Adventure House one of the aims is to get a sense of empowerment for the whole group, therefore it starts from the personal participation. Individual feeling of empowerment is a precondition to achieve empowerment on a community level (Rouvinen-Wilenius 2014, 52).

Youth today cannot manage to avoid hearing about the climate change or environment issues. There can be many different types of feelings towards them from anxiety to ignorance. The scale of nature crisis is huge and significant to all civilizations and touches us also in an individual level therefore anxiety feelings are quite natural response. It is important to deal with the emotions rising from the issues constructively. The feelings might help to motivate actions towards the nature but as long as the feelings will not turn into mental stagnation or a negative spiral it could be a sign of bravery. Bravery to care about the nature and the world. (Luonto ja tunteet, 2020a.)

Below there are some actions that could help in the feelings of anxiety about the nature:

- Talking and sharing the worried thoughts
- Creating art.
- Being out in the nature and exercising.
- Doing something concrete to influence the nature, little by little.
- Restricting the media intake on the topic.

- Developing skills facing the emotions and not ignoring them.
- Not losing hope. (Luonto ja tunteet, 2020b.)

2.4 Grouping

A group includes two or more persons with a common goal and that the people must interact with each other (Kopakkala 2018; Kataja & Jaakkola & Liukkonen 2011, 15). In this thesis grouping means increasing a group's interaction and functions. Grouping methods can be used as tools to get a group first to get to know each other, and to start the group formations five stages (Tuckman's group formation, which will be introduced in the future chapters). Understanding the grouping methods could lead into making the group function better and ultimately achieve a well-functioning group. (Keskinen 2015, 40-41.)

A good functioning group has positive dependency within the group, cooperation skills are thriving, and success comes as a whole group experience. The atmosphere in a well-functioning group is open, interactive, supportive, and confidential. Every individual is committed to the tasks within their own strengths. Commitment is created when the tasks involve individual work effort and responsibilities. Performing tasks together makes different opinions possible and combining them creates added value for the whole group. Reflecting experiences and behaviours is essential for learning and development of the group's strengths. (Kataja et al. 2011, 22-23.)



Figure 6: Bruce Tuckman's group formation (1965)

Group formation could be examined through Tuckman's theory Fig. 6, from forming, storming, norming, performing until adjourning. Every group will go through these phases consciously or unconsciously. In forming the group members get to know each other and are finding their place within the group. The group is discovering common rules and people try to adapt according to the situation. Storming phase is when conflicts arise, people are not afraid to express their opposing opinions. In norming phase people start to accept each other and roles in the group and sense of group spirit arises. The common rules are found, and different kind of viewpoints can be expressed openly. Performing is the stage where the group is productive, efficient, and creative. The group can solve problems together and the atmosphere is flexible and supportive. The final phase adjourning is group's separation, saying goodbyes. (Kopakkala 2018.)

Adventure House's groups are school groups which could be in different stages of group formation. Making a group better functioning is usually the goal when using adventure education as their method. Cooperation skills are very important to learn especially when it comes to the environmental education and as my theme climate change. Reversing or trying to slow climate change down requires cooperation skills. Together everything could be done, but not alone.

3 METHODS

3.1 Interviews

For the research-based method for the development work I chose qualitative method of interviews. Making an interview is one way of gathering knowledge and especially personal experiences from a specialist in the field (Hyvärinen, Nikander & Ruusuvuori 2017, 12). Qualitative method works well if the interest is more in the details of the structure and not in general composition and division (Metsämuuronen, 2008, 14). In

this thesis interviews served my purpose of getting personalized and expert knowledge for developing the product. I could not have achieved the same with a quantitative research method for example making a questionnaire.

Due to the Corona situation observing Adventure House's normal program was not possible in the current times, interviewing was the next best thing to get the knowledge I needed from their activities. Interviews with the professionals were providing opinions from the field of environmental education and therefore were providing valuable knowledge for this thesis.

The interviews were theme based and that gave a possibility to ask more elaborative questions if needed. In a theme based interviews all the different themes will be gone through even though the extend and order might change. This is especially expressed when interviewing people from different positions (Eskola & Lätti & Vastamäki 2018, 30). The themes were environmental education, adventure education, the activities around it and developing and designing activities. Interviews with professional with the expertise in this specific field is narrow, therefore using interviews is validated as a research method (Flick 2018, 4). I had some draft questions divided into themes which were thought in advance. The questions could be divided roughly into two categories: fact-based questions and opinion-based questions including questions about attitude (Hirsjärvi & Hurme 2001, 106). The interview was more of a discussion but still following the theme topics.

I conducted four interviews online. Three of them with different level workers from the adventure house and one interview with a worker from Finnish youth centre network (Suomen nuorisokeskusyhdistys ry). The first participants were chosen from the Adventure House since due to the Corona pandemic I was not able to participate and see the other program done in the Adventure House. Therefore, interviewing them was a way to get information from the programs. The fourth interview was chosen to get a clearer picture of the developing work in environmental education in a different youth work unit. There was no prerequisite needed for the interview required.

Participation to the interviews was voluntary and their identity will remain anonymous to respect the research ethics. I contacted the interviewees via email explaining my thesis topic and what information I would want to get from them. The interviews were conducted online due to the safety regulations and guidance for distant working caused by the Corona virus. I received a permission to record voice of the interviews to help the process of analysing the content of the interviews. The records and the transcripts will be deleted after the content has been analysed.

3.2 Brainstorming

Brainstorming is a community-based participatory development method, and it gives an opportunity to share ideas, increase efficacy and find solutions creatively in a group setting or individually. Brainstorming can be defined as idea sharing, solution finding or creating efficacy as a method between individuals or a group. The strengths of brainstorming are to generate new ideas quickly. It requires few material resources, and it is a democratic way of producing ideas and providing social interaction to work together to conquer problems or find solutions. Some weaknesses of the method could be that it requires a knowledgeable facilitator to read the group's dynamics to avoid social pressures. Brainstorming can be chaotic and intimidating and sorting out the best ideas out of the quantity of ideas might be challenging. (Wilson 2013, 2-7.)

Brainstorming method was suitable for my development product since it offers the possibility for quick solution finding in this case the product. I organised a collaborative brainstorming online with the commissioner when the data was analysed from the interviews. Collaboration with the commissioner enables to evaluate the ideas already in place and redefine them according to the needs of the Adventure House and the whole unit of environmental education. In this thesis brainstorming worked as an effective way to create content and great way to cooperate with the commissioner about the program that was being developed. The time was pre-set for an hour for the brainstorming event.

3.3 Methods of analysis

Methods I chose for my thesis were interviews and brainstorming from which I found both tools to work well for this study. In retrospect I could have chosen interviews also outside of Finland to get an understanding of different environmental educational tools used abroad.

After the interviews I went through the records and made a transcript and collected the content into a mind map with different clusters according to the themes of the interviews. The main focus was on environmental education and what element within it would be useful for the development product I am making. Interview as a method I found very good way to get expert information and recording the interview was a good way to prevent loss of information. The language used in the interviews was Finnish which was the mother tongue of all the participants. Using mind map as a break down style helped to clarify the main ideas from the interviews. Mind map process means that I allocated the answers or key concept coming from the interview under the category of the theme. Mind maps in an analysis is often used in qualitative studies but not so much in quantitative studies. It is a creative process that enables clear distinctions between the topics and elements (Åhlberg 2018, 59).

I found brainstorming to be extremely useful tool to be able to provide exactly the desired product to the commissioner. Talking and idea throwing in a relaxed atmosphere was useful for imagining what could work and what would be most beneficial to develop. During the brainstorming I simultaneously was making a mind map of the topics and ideas discussed. After, I colour coded the different element ideas and clustered them together to clarify the main results.

4 RESULTS

4.1 Interviews

The main insight that I achieved from the four interviews was the theme for the program: climate change. In addition, the playfulness nature of the activities and the importance of cooperation were emphasized in the interviews. Another finding was that nobody should be left alone with negative feelings about environmental issues. Cooperating and doing things together makes it easier to handle difficult issues.

Importance of group functioning skills and interaction came visible in many points of the interviews. One of the interviewees said (freely translated from Finnish) “...At the end when you ask what was the purpose of the day? What did you learn? And all of them say/shout together at the same time: cooperation...” It came apparent that the group knows what the purpose of the activities was.

Safe environment is important especially when being above the ground climbing or at the sea. Activities were categorised into different types: warming up, problem solving, creative activities, and ending reflective activities. These categories make up the core of the day activities in the Adventure House. There are many ways of participating in the activities. “...It is possible to participate in different intensity, meaning that somebody could participate by just moving one finger, it is still participating...” In any case it still produces a group experience.

When planning environmental educational activities, they should not be done in a teaching way as a lecture but as a fun and light-hearted way. Empowerment in the group is the goal through cooperation. I understood from the interviews that it depends a lot on the instructor how, and which activities are done. There is also flexibility to change plans depending on the group’s dynamics. There are roughly 15-18 instructors

working in the Adventure House, and therefore there are many ways to instruct a group with the activities.

Environmental education three pedals from the flower model were rising also as a topic in the interviews. The connection to the nature, actions toward the nature and insight how it all relates to my own life. Sometimes environmental education could be done as simple as changing names of the exercises. Doing activities in a sustainable way and using renewable materials is part of the actions already done in the Adventure House.

4.2 Brainstorming

Main insights of the brainstorming: three separate programs to incorporate within the Adventure House existing programs. Sea observation, solution factory and tale of an animal. These were the final three ideas out of all the other ones that were decided to continue to develop and take into as the product of the thesis.

Originally the aim of the product was to make a separate environmental educational program but in the brainstorming phase the product plan got modified to a new form. Reasons for this change was that by incorporating environmental educational elements in their existing program would most probably benefit the adventure house the most. Rather than creating a brand new program with zero testing done or insightful knowledge of all the activities and exercises already done in the adventure house, it was decided mutually to change the product to gain more value for the Adventure House.

When planning the activities with the theme of climate change, some unpleasant feelings might arise from it. Feeling of anxiety or helplessness could come, therefore the reflective questions at the end are aiming to relieve those feelings and makes it possible to express them.

5 PRODUCT

The end product was developed by combining the knowledge of the interviews and the brainstorming with the commissioner. Three activities were developed with the theme of climate change using observation, creativity, and imagination. The three individual programs could be incorporated in different types of activities within the Adventure House. At the end of each program there are couple of reflective questions that could be used to handle the possible emotional reaction from the activities. The sea observation could be part of Adventure House's kayaking trip. The solution factory could be part of outdoor or indoor day around the Adventure House and a tale of an animal could be taken into a part of nature trail or hike day. Below I will explain the activities and the background objectives around it. A detailed program can be found from attachments in Finnish.

Sea observation connects nature reading skills through observation while kayaking or being close to the sea. The nature reading skills could be seen as a skill to understand the nature around. What feelings and thoughts the observations bring and how we relate to what we see? Is the individual's behaviour conserving the nature or maybe even destructive? With questions to guide and help the observation, there could be moments of realization and inspiration from the nature. With the topic of climate change concerning the sea level rise or other observations skills could evolve during the activity.

Solution factory is a creative activity that uses cooperation and innovation within the participants. The aim is to create solutions for alleviating the challenges around climate change, particularly from a human point of view for example human laziness. It is done in small groups. This way the climate change subject could be easier to put to words and everybody can have their input in the factory and voice out their knowledge and suggest solutions. A message is also that with cooperating together it might be easier to think about the whole subject. When there is no pressure or competition creativity can be very powerful tool in hand.

Tale of an animal is also a creative activity that aims to connect the passing of time, climate change, and nature art together. In small groups the participants are asked to make a piece of art using the natural resources around them to represent how the time and climate change could be seen in the nature from a point of view of an animal of their choice. This exercise can improve cooperation skills using creativity and it opens up opportunities to think about the time scales in climate change concerning animal well-being.

6 CONCLUSION

The aim of this thesis was to combine environmental and adventure education into three activities from which the theme climate change could be processed in a constructive way, and I feel that this thesis has done that. Environmental education was easy to combine with adventurous activities based on the compatibility of the theories. My topic is timely for the state of the world today and most probably will be in the future.

The final product developed for this thesis was three separate environmental educational activities with the theme of climate change. The activities were sea observation, solution factory and tale of an animal. They were developed using the results of the interviews and brainstorming as well as using the knowledge base. The results indicate that it is possible to combine environmental and adventure education together as a functioning activity.

This thesis has not come together without some growing pains. The Corona pandemic (Covid-19) has played a role on my thesis, which brought some limitations that required me to adapt. I could have taken wider scale of interviews, but the brainstorming I found was very efficient for my purposes. The modifications done to the product in the brainstorming phase were adding challenge level since it was at quite a late stage. But the modification was important to make the product more valuable. One option

could have been, contemplating now in retrospect, I could have organised another brainstorming as a workshop style session with the commissioner to get feedback and further development ideas to improve the product.

Further possible development ideas could be instructing these three activities, evaluating them, and making further improvements. Long term goal would be behavioural change to be able to read the environment's cues or to use creativity as a source to find environmental solutions. Then with the behaviour change trying to make it as a habit. It is quite much too much to ask from a couple of programs, but maybe this will inspire somebody to develop or implement environmental element in their own work. Slowly by cooperating with others creating this planet a bit better place for the future generations.

For my professional development, this process of making the thesis has increased my knowledge about environmental education and how natural it was to apply within adventure educational activities at least in the designing level. Even if one student gets inspiration or changes their behaviour towards the nature, I feel this thesis has then been successful. It all starts with individuals working towards a common goal, and with cooperation anything can be achieved.

If you think you are too small to make a difference, you have not spent a night with a mosquito. (African proverb)

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APPENDICES

Appendix 1.

MERI HAVAINNOINTI – luonnonlukutaito tehtävä

”Merestä ja rannoista voi lukea paljon ympäristöön ja ilmastoon liittyviä asioita. Tämän tehtävän tarkoitus on lisätä luonnonlukutaitoa joka tarkoittaa että jokainen pystyisi lukea luonnosta merkkejä milloin se voi hyvin ja milloin huonosti. Ja miten siihen voisi itse vaikuttaa.”

Kajakoidessa tai jos matka vie läheiselle saarelle voi kysymysten avustuksella jokainen havainnoida ympäristöä joko yksin tai parin kanssa. Tämän jälkeen kysymyksistä keskustellaan yhdessä. Kysymyksistä voi valita mieleisiä/sopivia paikkaan missä on.

Mitä vaikutuksia merenpinnan nousulla olisi?

Mitä merkkejä ilmastosta voi havaita rannoissa?

Mikä olisi sinisimpukan kokemus ilmastonmuutoksesta?

Kuinka lämmin merivesi on? Mitä tapahtuu sen lämmitessä?

Onko myrskyn merkkejä havaittavissa?

- Mikä voisi olla lisääntyneiden myrskyjen vaikutus saaristoon ja rantoihin?

Mitä lintulajeja näkyy tähän vuodenaikaan?

- Tuleeko uusia lajeja ilmastonmuutoksen mukana vai häviääkö joku laji kokonaan?

Etsi mereen kuulumaton esine.

- Miksi se ei kuulu sinne?
- Mistä se voinut tulla ja minne se päättyy?

Reflektointikysymyksiä:

- Miltä tuntui havainnoida luontoa yksityiskohtaisesti?
- Mitä voimavaroja teillä on ilmastonmuutosta vastaan?
- Oliko luontoa helppo lukea?

ILMASTONMUUTOKSEN RATKAISUTEHDAS – luova tehtävä

(Mukaelma maailmanparannuskone-tehtävästä)

”Ilmastonmuutos on globaali ongelma, josta jokainen maa on vastuussa ja se vaikuttaa kaikkiin ihmisiin joka puolella maapalloa. Yhteistyöllä ja luovuudella on mahdollista hidastaa tätä muutosta. Tässä tehtävässä etsitään ratkaisua yhteen ilmastonmuutoksen haasteeseen yhteistyön avulla.”

Luokka jaetaan 4-5 hlö ryhmiin. Jokaiselle ryhmälle annetaan yksi ilmastonmuutoksen hidastamisen haaste (välinpitämättömyys, laiskuus, tietämättömyys, voimattomuuden tunne, taloudellinen kannattavuus tai ryhmän oma keksimä ongelma). Pienryhmissä ryhmäläisten olisi tarkoitus rakentaa yksi osa ilmastonmuutoksen ratkaisutehdasta, jolla tätä haastetta pyritään lieventämään. Käyttäkää luovuutta ja mielikuvitusta, tehtävässä ei ole väärää vastauksia. Ryhmäläisten ratkaisu voidaan esittää joko käyttämällä luonnonmateriaaleja tai käyttämällä omaa kehoa (pienen näytelmän/still kuvan muodossa). Aikaa annetaan esim. 30 min tai tilanteen mukaan. Lopuksi kierretään tehtaan linjasto läpi ja jokainen ryhmä esittelee oman tuotoksensa muille.

Reflektointikysymyksiä:

- Miten yhteistyö sujui pohtiessa ratkaisua?
- Mitä tunteuksia tehtävä herätti?
- Oliko ratkaisuja helppo keksiä?

ELÄIMEN TARINA – luova tehtävä

”Ilmastonmuutoksella on vaikutuksia pitkälle tulevaisuuteen ja kaikkia tämän päivän tekoja ja niiden vaikutuksia voi olla vaikea nähdä etukäteen. Tehtävän tarkoitus on hypätä jonkun eläimen saappaisiin ja kuvitella minkälaista sen elämä on ilmastonmuutoksessa tässä metsässä/alueessa tulevaisuudessa.”

Luokka jaetaan 4-5 hlö ryhmiin. Pienryhmät valitsevat jonkun eläimen tai hyönteisen, jonka näkökulmasta he ensin miettivät minkälaista elämää eläin viettää tulevaisuudessa ilmastonmuutoksen keskellä. Seuraava vaihe on, että pienryhmät miettivät minkälainen olisi eläimen tulevaisuuden toivekuva tästä lähialueesta ja rakentaa pienen teoksen luonnonmateriaaleja käyttäen (ei katkota mitään elävää luonnosta) tai piirtäen maahan taulun muotoon. Käyttäkää luovuutta ja mielikuvitusta, tehtävässä ei ole vääriä vastauksia. Aikaa annetaan esim. 20 min tai tilanteen mukaan. Lopuksi kierretään ja jokainen ryhmä esittelee oman tuotoksensa muille.

Reflektointikysymyksiä:

- Millaista oli tehdä taidetta yhdessä?
- Mitä tuntemuksia tehtävä herätti?
- Oliko toivekuvan aiheita helppo keksiä?