



Eco-social work and the accessibility of 'Martat' application in promoting and changing environmental attitudes

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promoting and changing environmental attitudes**

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The purpose of this thesis is to study whether the ‘Martat’ application promotes the accessibility of environmental attitudes for its users. The application belongs to Martha organisation, and it is recently launched which means they have a need to study it. Moreover, I chose this topic because I am interested in working with these themes in my future career as a social care professional. My working life partner is Martha organisation which, despite their application being newly born, has been around from the year 1899. They are a non-profit organisation working to promote sustainable actions and cohesion in a society by educating the public about home economics with topics such as environment, nutrition, and finances.

The theoretical framework of the thesis consists of theory on environmental attitudes including attitude accessibility, environmental knowledge and empathy which influences environmental attitudes, and methods to improve, and measurements of, environmental attitudes. Other theories that I will study in this thesis are eco-social work, ecosocial transition, and digitalisation.

Methods used for this research-based thesis are surveys and interviews for data collection methods and content analysis for qualitative data analysis method. My research question is ‘Does ‘Martat’ application promote the accessibility of environmental attitudes for its users?’ Target group of this thesis is ‘Martat’ application users and for this research approximately 28% of its active users were reached. Critical thinking and ethical considerations were implemented throughout the thesis process.

Main findings of the thesis are that majority of the participants showed strong environmental concern and they were actively seeking environmental knowledge which indicates that they possess pro-environmental attitudes. The participants had acquired these attitudes prior to using the application but many reported that the application promoted their actions and corresponded to their values by providing useful, up-to-date advice that fitted their needs.

Further research ideas could be to study how the age groups with lowest participation rate have found the application as majority of the application users are 50-69-year-olds and discover how to make the application more known to their age group as well. All in all, as I conducted my theory part of the thesis, I came across abstract ideas on environmental protection but concrete ways on how eco-social work can be conducted were not found. Therefore, an educational guidebook could be developed to help integrate eco-social work practice in different workplaces.

Keywords: environmental attitudes, accessibility of attitudes, eco-social work, Martha organisation, Martat application

Mari Pöllänen

Ekososiaalinen työ ja Martat-sovelluksen saatavuus ympäristöasenteiden edistämässä ja muuttamisessa

Vuosi

2022

Sivumäärä

65

Tämän opinnäytetyön tarkoituksena on selvittää, edistääkö Martat-sovellus ympäristöasenteiden saatavuutta käyttäjilleen. Sovellus kuuluu Marttaliitolle ja se on äskettäin julkaistu, mikä tarkoittaa, että heillä on tarve tutkia sitä. Lisäksi valitsin tämän aiheen, koska olen kiinnostunut työskentelemään näiden teemojen parissa tulevilla urallani sosionomina. Työelämäkumppanini on Marttaliitto, joka on vasta julkaistusta sovelluksestaan huolimatta toiminut jo vuodesta 1899. Martat ovat voittoa tavoittelematon järjestö, joka pyrkii edistämään kestäviä toimia ja yhteenkuuluvuutta yhteiskunnassa kouluttamalla kansaa kotitalousasioissa aiheilla kuten ympäristö, ravitsemus ja talous.

Opinnäytetyön teoreettinen viitekehys koostuu ympäristöasenteiden teoriasta mukaan lukien asenteiden saatavuus, ympäristöasenteisiin vaikuttava ympäristöosaaminen ja empatia, sekä keinot ympäristöasenteiden parantamiseen ja niiden mittaukseen. Muita teorioita, joita tutkin tässä opinnäytetyössä, ovat ekososiaalinen työ, ekososiaalinen siirtymä ja digitalisaatio.

Tässä tutkimukseen perustuvassa opinnäytetyössä käytettyjä menetelmiä ovat kyselyt ja haastattelut tiedonkeruumenetelmien osalta sekä sisällönanalyysi laadullisen tiedon analyysimenetelmän osalta. Tutkimuskysymykseni on "Edistääkö Martat-sovellus käyttäjiensä ympäristöasenteiden saatavuutta?" Tämän opinnäytetyön kohderyhmänä ovat Martat-sovelluksen käyttäjät ja tähän tutkimukseen saavutettiin noin 28 % sen aktiivisista käyttäjistä. Kriittistä ajattelua ja eettisiä näkökohtia toteutettiin koko opinnäytetyöprosessin ajan.

Opinnäytetyön tärkeimmät havainnot ovat, että suurin osa osallistujista osoitti suurta huolta ympäristöä kohtaan ja he etsivät aktiivisesti tietoa ympäristöstä, joka osoittaa, että heillä on ympäristömyönteisiä asenteita. Osallistujat olivat omaksuneet nämä asenteet ennen sovelluksen käyttöä, mutta monet ilmoittivat, että sovellus edisti heidän toimintaansa ja vastasi heidän arvojaan tarjoamalla hyödyllisiä, ajankohtaisia neuvoja, jotka sopivat heidän tarpeisiinsa.

Jatkotutkimusideana voisi olla selvittää, kuinka alhaisimman osallistumisasteen ikäryhmät ovat löytäneet sovelluksen, koska suurin osa sovelluksen käyttäjistä on 50-69-vuotiaita, ja selvittää, miten sovellus saadaan tunnetummaksi myös niiden ikäryhmien keskuudessa. Kaiken kaikkiaan opinnäytetyön teoriaosaa tehdessäni törmäsin abstrakteihin ympäristönsuojeluideoihin, mutta konkreettisia tapoja ekososiaalisen työn tekemiseen ei löytynyt. Siksi toinen jatkotutkimusideana voisi olla kehittää opas, joka auttaisi integroimaan ekososiaalisen työn käytäntöjä eri työpaikoilla.

Asiasanat: ympäristöasenteet, asenteiden saatavuus, ekososiaalinen työ, Marttaliitto, Martat-sovellus

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1 Introduction

Environment and environmental protection are currently a hot potato in many discussions regardless of the field of study and so social care field is not left untouched. On the contrary many researchers claim that social workers must be on the frontlines with environmental protection as social workers' existing skills can promote social change, as Ramsay and Boddy (2017) write. After all, environmental factors affect humans and societies, and social care work is about improving people's health and well-being. Environmental attitudes, furthermore, can predict behaviour which is an important factor in social change and environmental protection. This thesis will dive into environmental attitudes and more specifically how 'Martat' online application helps to promote or change environmental attitudes.

In the coming chapters, I will introduce the choice of topic, the objectives of the thesis, and the working life partner. Then I will explain the theoretical framework including environmental attitudes with environmental knowledge and empathy, as well as eco-social work, ecosocial transition, and digitalisation. After that I will introduce the methodological framework including data gathering method and data analysis method. I will conclude this thesis with the results, discussion, and conclusions.

1.1 The choice of topic and objectives of the thesis

I chose this topic due to the request from the Martha organisation which I approached to ask whether they had any thesis topics for me regarding eco-social work. After our email discussions, we decided to focus on environmental attitudes as the organisation has a need to study the recently launched application 'Martat' and because I found the subject interesting to learn about for my future career in social care field.

The objectives of the thesis are to study eco-social work from the perspective of 'Martat' application and investigate if it is encouraging its users to act more sustainably in their life. I will carry out a research-based thesis with surveys and interviews and a content analysis for qualitative data analysis method. The target group is 'Martat' application users, and my research question is 'Does 'Martat' application promote the accessibility of environmental attitudes for its users?'

1.2 Working life partner and 'Martat' application

My working life partner is the Martha organisation which is a non-profit organisation established in Finland (Martat 2022a). They focus on educating the public about home economics with subjects like nutrition, environment, and finances. Their aim is to improve the lives of

individuals and families as well as to improve cohesion in a society. It was founded already in 1899 which means they have a long history behind them. In the early years, when they started, they were helping different disadvantaged groups during the wartimes. After that as the economy started to get better so started Martha organisation to expand and improve its activities as well as become more active in advocating for a better society. The new focus was on home economics, well-being, and health. Society's existing issues have driven Martha organisation's activities and development which is why environmental protection and sustainable development are part of their principles. (Martat 2022a.)

Martat application is an app which can be downloaded to a mobile device, and it was launched in autumn 2021 (Kokkonen 2021). It brings topics, that Martha organisation has been educating in localised communal sessions, to the close reach of mobile device users. The user can choose topics, which are most interesting to them, to appear on the front page of the application and get recent tips and recipes on chosen topics to scroll through. Topics include nutrition, preservation of food ingredients, and recipes with special attention to different diets, as well as crafts and gardening. One can find information on different events and courses organised in different places from the application. The application also has discussion forums where one can ask advice on different topics from peers or professionals on the same topics as mentioned before. Language of the application is Finnish, and one needs to register to it to use it, but it is otherwise free of charge.

Martha organisation wanted to create the application so that it could bring all Finns who are interested of sustainable development under the same virtual roof to share their best advice (Martat 2022b). The designer and product owner of the application is Minttu Salminen, and the application was designed to be personal and easy to use for its users. Another idea was that it can create a community which is not tied to geographical locations. The principals of the making of the application were to make it look like a Martha product, transparent and joyful. Martha community was involved in the making of the application making sure that people from different ages and mobile device users were considered. Salminen has been shaken by the fact that very few women are involved in the development of digital products. Salminen believes that technology has a big part in this world and the significance is ever growing. It also shapes our everyday life which is why Salminen wants to be influencing whose voices are heard in the process. (Kokkonen 2021, 45-46).

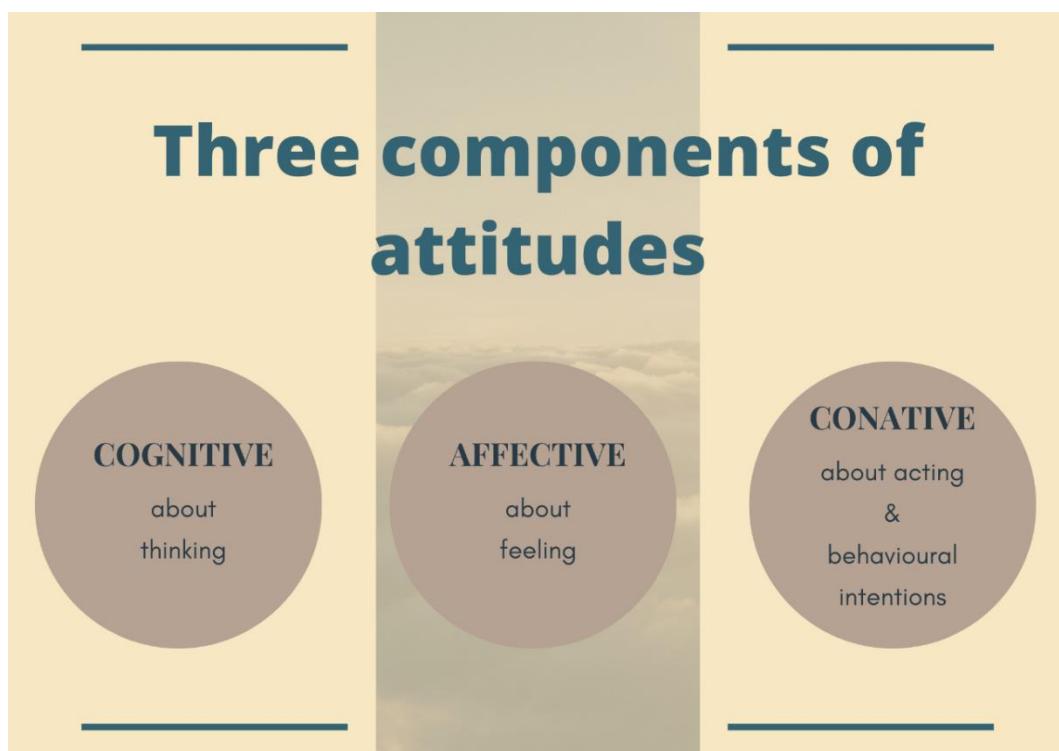
2 Environmental attitudes

In this chapter, I will investigate a concept of environmental attitudes which is at the core of my thesis, and it stems from social psychology studies. I will explain what attitude means, how to impact people's attitudes, and how attitudes are linked to behaviour. Furthermore, I will

look into how environmental knowledge and empathy is related to environmental attitudes. I will also look at why it is important to study environmental attitudes and how they are best measured.

According to a guide booklet ‘Tietoa luonnon hyvinvointivaikutuksista’ made by HUS (Helsinki University Hospital) and Metsähallitus (n.d.), nature has many improving health benefits in social, physical, and psychological level. These benefits include, but are not limited to, reduced blood pressure, pain relief, stress reduction, increased physical activity and social interaction (HUS & Metsähallitus n.d.). These benefits should encourage individuals to behave protectively towards nature, as explained by Ienna, Rofe, Gendi, Douglas, Kelly, Hayward, Callen, Klop-Toker, Scanlon, Howell, & Griffin (2022). Nevertheless, as Ienna et al. continue, long research history illustrates that, even though it would benefit individuals, changing human behaviour is difficult.

Attitude is a construct which exists, but is not easily explained, and it is psychologically tied to an object, as Gifford and Sussman (2012, 65) explain. The object, sometimes referred to as an “attitude object”, is in this case the environment and more specifically a concern for it or caring about environmental issues, also described as ‘pro-environmental attitude’. Attitudes should not be confused with beliefs, opinions, values, or personal norms or character even though they relate to attitude’s three components in subtle ways. As Gifford & Sussman (2012, 65) continue, the three components are cognitive, affective, and conative, as can be seen from the picture below.



Picture 1: Three components of attitudes as explained by Gifford & Sussman (2012, 65).

Cognitive component refers to how one thinks about the object, affective component is about how one feels about the object, and conative component is about how one acts towards the object. Environmental attitudes, or pro-environmental attitudes, are therefore about one's thoughts, feelings, and actions towards environmental protection.

The reason to study environmental attitudes, as Gifford and Sussman (2012, 66) explain, is that attitudes might determine behaviour. However, it is a tricky theme to study as people's behaviours are unique and there are no set predictors to analyse it. Moreover, people may demonstrate strong concern for the environment, but their actions might tell another story. However, despite stating that there is discrepancy among researchers about the extent to which environmental attitudes can predict behaviour, Mobley, Vagias and DeWard (2009, 436) conclude that specific behaviour can be predicted by specific attitudes. This is an aspect to take into consideration when preparing survey/interview questions for 'Martat' application users.

Another issue with predicting behaviours with attitudes, that Gifford and Sussman (2012, 66) mention, is that respondents' bias regarding social desirability can influence self-reported answers during data collection. Being environmentally concerned is seen as socially desirable which might lead participants to alter their answers to fit the existing trend rather than base it on their actual concerns. Regardless of this, Gifford and Sussman conclude that self-reported attitudes and social desirability is only weakly related and does not affect pro-environmental behaviour.

2.1 Attitude accessibility

As explained in the previous chapter, environmental attitude is about thinking, feeling, and behaving towards environmental protection. The attitude is more accessible the more one has knowledge of the object of the attitude, in this case environmental concern, as explained in the coming chapter 2.2 - Environmental knowledge and empathy. As with knowledge, one has more thoughts and feelings regarding the object and thus more actions towards it. When discussion of the attitude object is done based on scientific foundation, the knowledge regarding the object grows (Oksanen 2017). For example, informal but factual, discussions about environmental protection in one's circle of friends increases one's knowledge of environmental protection. Therefore, attitude accessibility refers to the connection between one's thoughts and feelings and behaviour towards an object. Moreover, it is possible to influence attitudes with persuasive messages but more on this and associated theory about the 'Elaboration likelihood model' in chapter 2.3 - Methods to improve environmental attitudes.

The link between attitudes and behaviour, as Helkama, Myllyniemi, Liebkind, Ruusuvuori, Lönnqvist, Hankonen, Mähönen, Jasinskaja-Lahti & Lipponen (2015, 196) write, is that the stronger the accessibility of the attitude the stronger the connection to behaviour. When one has more knowledge on how to make environmentally friendlier choices, those actions are easier to remember, and they are likely to spontaneously pop in one's mind. Helkama et al. give an example that when two people have pro-environmental attitudes but one of them knows more about recycling that person would more likely act based on their attitude. The more a person has knowledge of the attitude object the more accessible the attitude is which then is more likely to lead to actions.

Thus, Helkama et al. (2015,196) highlight that the *accessibility* and *strength* of an attitude mean the same. The same is written by Descheemaeker, Spruyt, Fazio & Hermans (2016, 97) who refer to the work of Fazio in 1995 and 2007, that attitude accessibility can be imagined to be the *strength* of the relation that is between an attitude object and the summary assessment of it. Meaning how easily an attitude can be accessed from a person's memory. Descheemaeker et al. also mention that 'attitude rehearsal' is one aspect of attitude accessibility, in other words, studies have shown that when an attitude expression is repeated it strengthens the attitude accessibility.

Spencer, Peach, Yoshida & Zanna (2010, 95) explain that to interact in their social environment people come across two essential tasks. One is understanding how the world works, which objects to deal with and which ones to avert, as some objects will enable them to work efficiently, and others can hinder their success. This understanding can come from personal experience, and it can form the basis of one's attitudes. The other task is to understand how others respond to the objects since humans are social beings, to understand which objects will help enable belonging to a social group and which objects will hinder the sense of belonging to a group. Since 'Martat' application is made to strengthen the community spirit of users regardless of geographical location, it could direct people to certain objects such as sustainable development actions to feel belongingness in a group.

All in all, attitudes influence behaviour and the stronger the accessibility of an attitude the more strongly it affects behaviour. The accessibility of an attitude means that a person has acquired a lot of knowledge regarding the object of the attitude. Based on this knowledge they are able to act according to the attitude. Repetitiveness also strengthens the accessibility of an attitude as it means that knowledge to behave in certain way is fresh in one's memory.

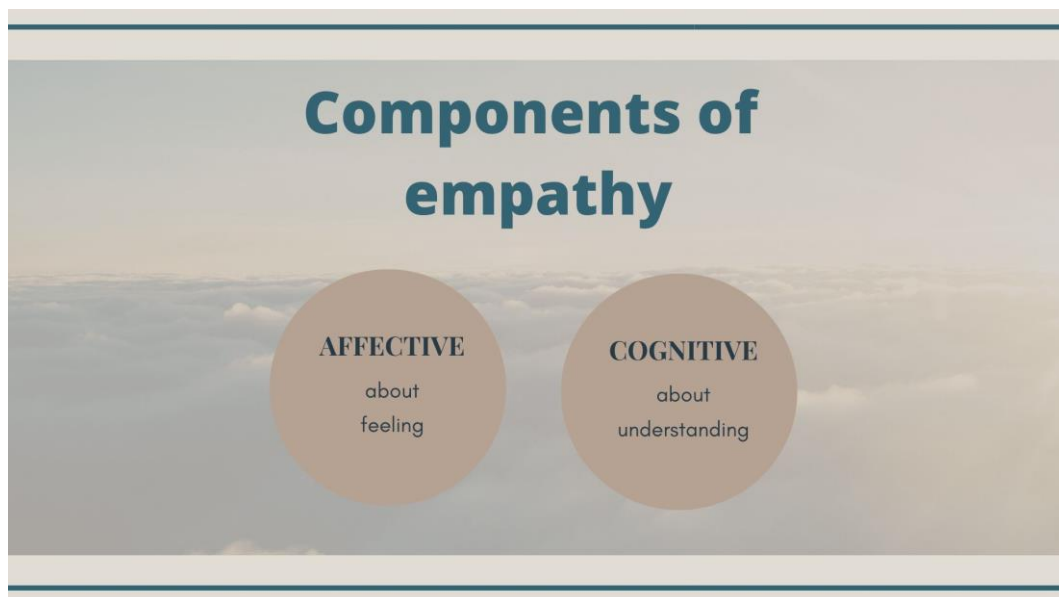
2.2 Environmental knowledge and empathy

According to Ienna et al. (2022), one factor affecting pro-environmental attitudes and behaviour is environmental knowledge. In fact, having environmental knowledge is said to be a precondition as with incorrect or poor knowledge it is difficult to make environmentally

sustainable actions or choices. This in mind, Martat application can act as a tool to provide environmental knowledge which then in turn promotes environmental attitude accessibility and environmentally friendly behaviour.

Geiger, Geiger & Wilhelm (2019) did research on general knowledge and environmental knowledge and their impacts on environmentally significant behaviour. Their results show that environmental knowledge and general knowledge were inseparable from each other, meaning that also general knowledge led to environmentally friendly behaviour. In addition to this, age proved a significant aspect to acquired general knowledge as with age a person has been subject to more knowledge. Geiger, Geiger & Wilhelm also note that environmental knowledge that comes indirectly via moral norms, feelings of guilt and/or aims to behave more environmentally friendly all affect pro-environmental behaviour.

Another factor affecting pro-environmental behaviour is empathy, as Ienna et al. (2022) continue. Empathy is also a psychological construct which many researchers agree to have an affective component and a cognitive component which can be seen from the picture below. The affective component is about feeling others' suffering while the cognitive component is about understanding others' suffering.



Picture 2: Components of empathy as explained by Ienna et al. (2022).

Ienna et al. (2022) explain that people who possess higher levels of empathy have stronger pro-environmental behaviour and attitudes compared to people with lesser levels of empathy. However, Ienna et al. also mention that empathy is filled with biases making it an aspect that can paralyse pro-environmental attitudes which would mean that instead of acting protectively

towards environment, people would do nothing. Therefore, a combination of empathy and knowledge of the consequences of one's actions is an important element.

In conclusion, through environmental knowledge people can make sustainable choices in their everyday life. Whether the knowledge is general knowledge or specific environmental knowledge does not matter but the overall awareness of one's surroundings and the state of the world were enough to evoke environmentally friendly behaviour. In this regard, it is suggested that older people would have more knowledge as they have had more time to acquire it. Empathy is also said to be linked with environmental behaviour, but it can simultaneously be a paralysing characteristic rendering a person to do nothing.

2.3 Methods to improve environmental attitudes

According to Gifford & Sussman (2012, 71), the methods to improve environmental attitudes are messages portrayed in the media and environmental education. Mass media reaches many people today and thus influences a lot of people. However, whether it gives out positive or negative effects depends on how the message is delivered, for example, delivering messages that empower are more effective than messages on sacrifices as told by Gifford & Sussman (2012, 71) who refer to the work of Gifford & Comeau in 2011. Furthermore, evoking fear and worry should not be portrayed if there are no means explained on how to relieve them. In addition, there is no single message to be told but on the contrary messages should be locally tied and actions should be constantly encouraged even though positive results might be in the distant future. Successfully crafted and delivered environmental messages can lead to increased environmental concern and understanding. (Gifford & Sussman 2012.)

Gifford & Sussman (2012, 71-72) continue that while formal education can increase environmental concern, it is not always successful. According to them, it appears that engaging people, at least students as the studies show, in problem solving activities with increased knowledge on the issues, skills to solve them, and giving faith that they can solve them, would lead to pro-environmental behaviour.

Moreover, Helkama et al. (2015, 199) and Stroebe (2008, 135) write that persuasion and incentives act as means to achieve change in attitudes and behaviour. They also mention that persuasive messages portrayed in the media can alter attitudes. Helkama et al. (2015, 201-203) refer to the work of Petty & Cacioppo in 1986 who developed an Elaboration Likelihood Model - ELM. The ELM is one of the most known 'dual process models' which assumes that people have two routes to process information, one route is systematic and the other is not, as can be seen from the picture below. The ELM presumes that the impact of the message depends on how the receiver processes the information.

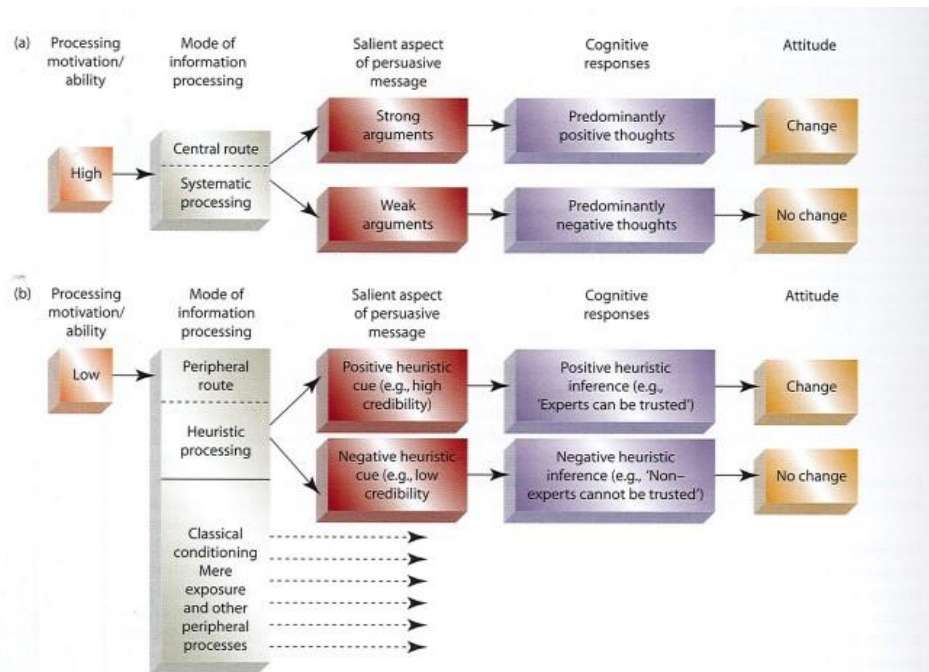


Figure 7.4 The elaboration likelihood model: (a) central route to persuasion; (b) peripheral route to persuasion.

Figure 1: The elaboration likelihood model by Petty and Cacioppo mentioned in Stroebe (2008, 140).

The systematic way of processing information, according to Helkama et al. (2015, 201-203), happens when information is properly processed, thought over and dissected, and leads to a change in attitudes. For example, two people read a same article about NATO-membership and the other person is interested in politics and is studying political sciences. That person is motivated to read and ponder about the article, form their own opinion on it, and act based on that. This is systematic way of processing information, and it can create a relatively permanent change in attitude. The change can be for or against the original statement based on how strong arguments the message has. Therefore, if the message is poorly explained it can create a 'boomerang effect' that is to change the attitude in the opposite direction than what the message's original statement intended. The systematic way of processing creates stronger attitudes which are less susceptible to counterstatements and are likely to influence behaviour.

The un-systematic (heuristic) way of processing, according to Helkama et al. (2015, 201-203), is more superficial and is based on secondary aspects such as believing the word of the messenger because they are a professional or a relatable person instead of understanding the message. For example, the other person, reading the same NATO-membership article who is not interested in politics nor has any opinion regarding NATO-membership, just checks that the person who wrote the article is a professional in that field, skips to the end to read their opinion on the matter and acts based on that. This is un-systematic way of processing, and it creates a

temporary change in attitude. This way of processing is weaker and more susceptible to change than the systematic way of processing.

Stroebe (2008, 150) further explains how attitudes can change with incentives when powerful institutions, such as governments, influence behaviour. For example, legal sanctions to seat belt usage in cars and taxation on alcoholic drinks and cigarettes, have influenced people's behaviour and consumption. However, Stroebe mentions that it is the specific attitude towards a specific behaviour that is effective. For example, taxation on alcoholic beverages influences one's attitude towards the act of buying those beverages but not on the attitude towards drinking them. Therefore, people might return to their old consumption rates when not restricted by taxations.

All in all, methods that improve environmental attitudes are persuasive messages which should be locally tied, concrete, and encouraging rather than evoking guilt. It also affects how the persuasive message is received, the systematic way of processing that is to thoroughly understand the message, will lead to accepting an attitude which is more difficult to change. On the other hand, un-systematic way means accepting an attitude without much consideration, but it is more easily changed with new persuasive messages.

2.4 Measurement of attitudes

According to Gifford & Sussman (2012, 66), when it comes to measurement of environmental attitudes, several scales and questionnaires could be used because measuring attitudes will require detailed and up-to-date methods. At least 15 different measurements for attitudes have been developed since the 1970 but experimenters prefer to create and use new measurements rather than those already tried and validated. One of the earliest measurements that Gifford & Sussman mention is 'The Maloney-Ward Ecology Inventory' which included cognitive (about thinking/knowledge) and conative (about acting) components in addition to traditional attitude description. Next came a shorter scale which did not include any subscales called 'The Weigel Environmental Concern Scale'. Dunlap & Van Liere's 'The New Environmental Paradigm', from 1978, is the most commonly used which measured respondents' belief of the fact that Earth is sacred and deserving of protection. A revised version of this was developed in 2000 and it is called 'The New Ecological Paradigm Scale'.

Gifford & Sussman (2012, 67) continue that throughout the 1990's several scales were made. Banerjee & McKeage's 'The Environmental Scale', from 1994, measures attitudes regarding environmental problems' severity and attitudes which falls outside of self, such as legislation, and attitudes about one's personal connection to nature and other personal concerns. 'The Motivation Toward the Environment Scale' was developed in the 1998 and it measures the motivation to participate in environmentally friendly actions. 'The Survey of Environmental Issue Attitudes' measures attitudes regarding more specific and particular environmental

concerns. In 2010, Milfont & Duckitt created an 'Environmental Attitudes Inventory' which comprises of 120 items. This lengthy scale is comprehensive and based on thorough analysis of existing measures of attitudes.

According to Gifford & Sussman (2012, 67-71), aspects that affect attitudes are age, gender, socioeconomic status, levels of environmental concern, international differences, urban-rural residence, religion & politics, personality & values, direct experience with nature, and education & environmental knowledge. In addition to already mentioned that 'age' brings knowledge, Gifford & Sussman mention that most research shows that younger people are more concerned for the environment than older people. Regarding 'gender' Gifford & Sussman continue that women tend to have more concern for the environment than men but have lower pro-environmental behaviour and knowledge. However, it is said that the research on this is rather dated and in need of revision. In light of this and gender sensitivity, it could be considered that knowing gender regarding my research is irrelevant.

Likewise, regarding 'Socioeconomic status' the research shows inconsistency. On the other hand, higher income has been linked to having more knowledge, resources, and time to act on environmental issues. While on the other hand, passion on its own can be enough to act positively towards environment and rather lower income earners can exhibit higher levels of environmental concern than those who earn more. Therefore, I would leave socioeconomic status out from my data collection. 'Levels of environmental concern' refer to the fact that personal determinants affect pro-environmental behaviour, for example, one can have concern for the environment but is un-willing to change their consumption behaviour accordingly. (Gifford & Sussman 2012, 67-68.)

Gifford & Sussman (2012, 68-69) continue that the country one is from affects how good environmental knowledge they have and how they feel their actions can impact the environment. However, as the 'Martat' application is directed to people living in Finland, I will leave this aspect out of the data collection as well. 'Urban-rural residence' research is again inconsistent, as in Canada both urban and rural residents displayed high levels of environmental concern but in German people living in urban places displayed stronger verbal commitments to act pro-environmentally than rural dwellers. However, on other environmental concern measures the groups did not differ from each other. Therefore, I will leave 'urban-rural residence' out of the data collection.

'Religion & politics', according to Gifford & Sussman (2012, 69-70), refer to the connection of religion and politics affecting environmental concerns. However, the research is again mixed, religion is said to lower the levels of environmental concern but on the other hand it can act as an empowering aspect to take environmentally friendly action. Politics refer to what people are likely to believe, such as people belonging to certain parties do not believe in climate

change for example. However, due to the sensitivity of acquiring this information in addition to the inconsistency of the results, I will also leave this information out from the data collection. 'Personality & values' is an important aspect in the data collection as it is researched that for example, feelings of self-efficacy and openness to experience are related to higher levels of environmental concern. Values, such as self-expression and quality of life over materialistic tendencies and having concern for others and the environment, influence environmental attitudes. (Gifford & Sussman 2012, 70.)

As Gifford & Sussman (2012, 70-71) explain, 'Direct experience with nature' refers to the fact that participating in nature-related activities can be linked with higher levels of environmental concern depending on the type of activities. For example, one theory proposes that engaging in nature photography increases pro-environmental concern and on the other hand, hunting did not. Regarding 'education & environmental knowledge' it is already mentioned that environmental knowledge is the prevalent to pro-environmental behaviour. However, according to Gifford & Sussman the way the knowledge is acquired matters. It was reported that people who read the newspapers have higher levels of environmental concern than those who watch TV, unless they watch nature documentaries, news, and science shows. It was also mentioned that private school education increased environmental concern than public school education but since in Finland the difference between private and public schools is not that significant, I will leave that part out of my data collection.

In conclusion, several measurement tools have been made each one focusing on different aspects of environmental attitudes. However, researchers prefer to create their own measurement tools to assure it is up to date. Moreover, research shows that many different aspects influence one's environmental attitudes and behaviour but after critical consideration I decided to focus on participants' age, their level of environmental concern, their personality and values, their experience with nature, and their environmental knowledge.

3 Eco-social work

In this chapter, I will explain eco-social work and its importance in today's social work field. I chose eco-social work as one concept to study as it explains how 'Martat' application is related to social care field. I will briefly introduce the concept eco-social transition as it could be seen as the force in the background. I will conclude this chapter with more information regarding Marthas and how the organisation has developed through time and participated in society's current issues.

According to Charles Sturt University (n.d.), eco-social work is an area in the field of social work that is one of the most relevant in the present time. Rightfully so, as it focuses on how

environmental issues impact humans and communities. They highlight that the connection of people's well-being and environmental factors are becoming more and more common in the social work field. They explain that eco-social work is also known as ecological social work, green social work, or environmental social work, so I will use these concepts in my research interchangeably. (Charles Sturt University n.d.)

The background research shows how the need to integrate the environment into social care field has exponentially gained importance, as Ramsay and Boddy (2017) explain. In recent years, increasing number of publications regarding adding environmental aspects to social care education indicate a change in the profession. This means that while the natural environment was absent in contemporary social work education, the trend is changing. The request for change has also come from students who want to learn to be more active in the face of environmental issues, as Ramsay and Boddy write.

Ramsay and Boddy (2017) highlight that several articles demand increased awareness regarding the relationship between humans and nature. Especially, how disrupting natural systems is a humanity's ability which should be talked about and changed. That humanity is not only using nature's resources but overusing them, as written by Tankha (2017). Therefore, a shift to ecocentrism, which is the broadest worldview which values all natural organisms according to Cryer, Kopnina, Piccolo, Taylor, and Washington (2017), is demanded. Same is written by Tankha, who describes it as "deep ecology worldview", that we must be in harmony with nature by limiting our growth and valuing all living things, in other words, to stop exploiting natural elements for human needs.

Moreover, Gray, Coates, and Hetherington (2012, 8) refer to the work of Besthorn in 2011 who mentioned that 'deep ecology' should be integrated in the social work education and practice as it offers a different view and a fundamental change in the way we see the human-nature relationship. Deep ecology realises that humanity's well-being is only possible if well-being of all life is considered that we must think about the role of humans in this planet concerning this topic.

Furthermore, Lena Dominelli (2020) paints the picture of how the inability to tackle environmental issues has led the global world susceptible to zoonotic diseases, such as SARS, rabies, salmonellosis etc., and as much the Covid-19 pandemic demonstrates. Therefore, while social workers and social care workers can be present in disaster intervention, that is dealing with the consequences of natural disasters, the focus should be in pro-active measures which prevent natural disasters, caused by humankind, from happening (Dominelli 2020; Ramsay & Boddy 2017).

Gray, Coates, and Hetherington (2012, 13) explain that environmental social work can be interventions at a micro, mezzo, and macro level. For example, on a micro and mezzo level

people are given lifestyle guidance and educational programmes to make ecologically sustainable choices in their life. This is what 'Martat' application does with their tips on sustainable consumption, preservation of goods and lowering one's carbon footprint.

3.1 Ecosocial transition

According to Matthies (2017, 17), ecosocial (or socio-ecological) transition refers to the development of ecological, social, and economic aspects in society with an interest to the relation of ecological and social sustainability. Therefore, also social aspect must be developed alongside with the ecological and economic elements (Peeters 2012, cited in Matthies 2017, 27). This transition considers the efforts of activists, policymakers, and researchers alike. Changing several elements in society must be established, in addition to caring for the biophysical environment and reducing the misuse of the earth's natural resources in the economy, to be sustainable.

Social workers tasks in this transition could be to support sustainable practices, such as taking little advantage of nature's resources and wasting only little, emphasising in recycling, minimal energy, and material consumption. In other words, focusing on circular economy. Communal practices could be counselling on energy-saving, organising organic food cooperatives, and neighbourhood flea markets. Not to forget the structural changes needed, social workers can report of the lives of their clients and what is needed in the field, for the decision-makers to change the policies. (Helne & Hirvilammi 2017, 45.) Moreover, according to Powers (2017, 290), social workers can utilise natural elements to benefit their clients, such as Green Care activities, while also teaching them how to protect their environment.

Matthies (2017, 20) continues, that ecosocial transition is promoting radical changes which must be distinguished from reforms or actions which maintain the current situation with little ecological utilisation, in other words, 'green-washing'. Moreover, in ecosocial transition, the relation of ecological and social problems is considered. Social work contextualises the problems, interprets those problems in an individual and community-level, and works to prevent any consequences because of those problems, as well as takes responsibility in finding solutions to them. (Matthies 2017, 22.) While Martha organisation does not take a radical stand on environmental issues, their pioneering long-term work has always been about sustainability. Holistic sustainability at that, meaning that it considers the ecological, social, cultural, and economical aspects. (Martat 2021.)

3.2 Martha organisation

From the beginning of their journey, Marthas have paid attention to equality. Salovaara (2022) explains how the Martha dress, which have been in use among the Martha members, represents equality. It was designed in 1930 and it was worn so that no one can show their wealth with

how they dress as all the Marthas wore the same dress. Everyone is welcomed to be a Martha regardless of one's gender, educational background, financial situation, work history etc.

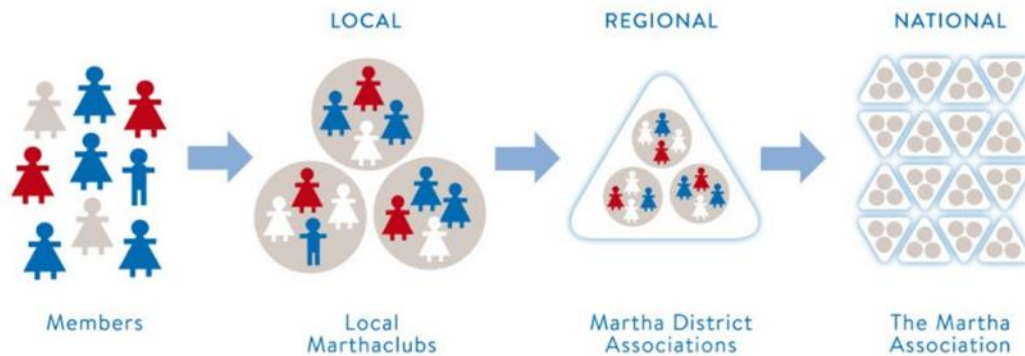
Marthas have been spreading knowledge on different issues throughout the times to promote equality. At the start of their journey, Marthas taught disadvantaged women to read and write. Their principles were that women should have independent economy to support themselves. These principles were also spread to Africa, as Marthas have been working a development cooperation in Africa in different NGOs for 40 years now. (Salovaara 2022.) Moreover, Marthas are working towards anti-racist society together with other associations such as Mixed Finns Ry (Jäske 2022).

Another principle Martha organisation has strived to accomplish is to be working with current themes. For example, as equality has been in their principles from the beginning, the work regarding it also develops overtime to adapt to current social situations. In 2022, Marthas were partnering up with Helsinki Pride supporting the rights of LGBTQI+ people. (Salovaara 2022.) Environmental concern has also increased overtime and currently Marthas are, for example, cooperating in the DeCarbon-Home project with University of Helsinki among other organisations (Vainikka 2022). The project aims to develop the transition to a more sustainable and fair living and constructing. Vainikka continues that Marthas are in a crucial position in this transition as Marthas provide practical advice and support to sustainable living.

Furthermore, Vainikka (2022) mentions attitudes and refers to the work of Rapley in 2012 regarding how people are influenced by the opinions of other people with whom they identify with. This influences the changes we make in our everyday life as the actions stem from attitudes which are accessible to us. If one has learned to listen and believe the word of an influencer who does not believe in climate change, changes to a more sustainable lifestyle are difficult. Regardless of the difficulties, Vainikka highlights that if there are organisations in Finland which stir up conversation about sustainability, the transition is possible.

Regarding communication, Marthas have strong social media coverage as they are in YouTube, Instagram, Twitter, and Facebook, as well as have podcasts on Spotify and Buzzsprout. In addition, they publish a magazine, online and a paper version, called 'Martat' and share blog texts from different people. Moreover, Martha clubs spread knowledge in their local areas and national Martha days encourage networking among different actors and organisations.

THE MARTHA ORGANIZATION



Picture 3: The Martha Organisation from Martat (2022c)

In the picture above, one can see how the Martha organisation takes shape. It consists of members who belong to local Martha clubs which belong to localised Martha District Associations which then form the Martha Association. In 2021, there were over 21 000 Martha members and over 1000 Martha clubs in 250 cities and municipalities in Finland. There are 14 districts, and each district is managed and developed by a voted board, home economics professionals, and an executive director. (Martat 2022c.)

All in all, Marthas promote positive encounters and showing gratitude to others' accomplishments which then encourage others to develop their skills further. Their equality principle stems from Finnish law which states that no one should be discriminated because of their background (Finland 2014). They highlight that everyone must be heard as they are and discriminating behaviour must be challenged. Furthermore, each club has access to general guidelines of safe spaces which they can go through together and develop to fit their club's needs. (Lindqvist 2022.)

4 Digitalisation

In this chapter, I will dive into digitalisation as the 'Martat' application falls under this category. Related to digitalisation are technological devices and their planned obsolescence which I will also shortly explain. Regardless of its environmental impacts, digitalisation can bring towards sustainable change which I will study further in this chapter.

Digitalisation impacts environment in different ways. According to Gupta & Rhyner (2022), digitalisation is broadly known as the source for change towards sustainable development and

transformation. However, it should not be forgotten that digitalisation is also a threat to environment, and, for example, Sitra is conducting constant research on the impacts of digitalisation on environment, as Toivanen (2019) writes. Moreover, as Kuntsman & Rattle explain (2019), digitalisation needs technological devices and making technological devices consumes natural resources.

However, Toivanen (2019) highlights that, blame should not be on the consumers as the design of the technological devices can impact consumer behaviour significantly. Devices are often created by designed (or planned) obsolescence (Kuntsman & Rattle 2019), meaning that a device is made so that it will stop working properly in a certain time frame, as told by Park (2020). The device might be unfixable or fixing it would cost more than buying a new one which consequently makes the consumer buy new devices. However, in the EU, new regulations are proposed to be put in place to fight planned obsolescence, to let consumers know the lifespan of their devices and whether those are repairable, as written in a press release by the European Commission (2022).

Regarding digitalisation's effects on behaviour, Kuntsman & Rattle (2019) conducted research on digitalisation as mediator for change in behaviour and education on sustainability. Most of their findings exhibit that digitalisation can provide a positive approach as mobile digital devices can be new educational tools which can be personalised, transportable, and engaging. Digital devices create new ways to access knowledge and to connect with environment which can happen outside of traditional learning environments. Furthermore, digital devices were seen as possibly more environmentally friendlier than textbooks. (Kuntsman & Rattle, 2019.)

Kuntsman & Rattle (2019) continue, that with online environments and platforms there is a possibility of knowledge sharing and community building which can influence change which "the digitally mediated education for sustainability can bring". Therefore, stating that digitalisation can be a tool to provide change in society. Moreover, Kuntsman & Rattle's findings state that online environments were seen suitable for the education on sustainability. They mention virtual worlds, online simulations, and gamified learning as ways to increase environmental awareness. They also highlight active engagement via self-directed, innovative learning, and collective and critical thinking regarding topics on sustainability which is what 'Martat' application does as the users can search for topics, they find interesting and crucial, and start discussions with other users as well as professionals.

Moreover, Coşkun & Erbuğ (2014, 216) discuss about the designing of products which purposefully encourage users to behaviours that are environmentally responsible. This could be done via an assistant which gives recommendations on different daily activities like transportation, eating habits, and consumerism. Therefore, design can be used to modify existing behaviours but also encourage new pro-environmental behaviours. Coşkun & Erbuğ

continue that designers must have a thorough comprehension of a persuasion context, that is to understand what factors are involved in the context and what factors are related to a successful persuasive attempt, in order to encourage pro-environmental behaviours with the design.

Coşkun & Erbuğ (2014, 216) refer to the work of Oinas-Kukkonen & Harjumaa in 2009 to explain their persuasive system design model. According to this model the persuasion context has three key elements which are 'the intent', 'the event', and 'the strategy' as can be seen from the picture below.



Picture 4: The three key elements of the 'persuasion context' as explained by Oinas-Kukkonen & Harjumaa 2009, cited in Coşkun & Erbuğ (2014, 216).

'The intent' consists of the persuader and of the change the persuader is trying to accomplish. In the case of the 'Martat' application, the application is the persuader, and its accomplishment would be to increase or maintain pro-environmental behaviour. 'The event' refers to a situation where the persuading happens, to the technology, which was used for persuading, and to the user's characteristics. Regarding the 'Martat' application the situation would be everyday life, the technology would be a mobile device, and the user's characteristics refer to psychological aspects including, but not limited to, attitudes which influence the likelihood of behaving as persuaded. 'The strategy' refers to the persuading message and how it is conveyed to users. (Coşkun & Erbuğ 2014, 216.)

Coşkun & Erbuğ (2014, 216-217) further explain that while smart phone applications do not have intentions of their own, as they only express the intentions of the designer, they still have great capacity to initiate pro-environmental behaviours. With the mobility aspect of applications, users can access knowledge at the right time and place which can enable a change in behaviour. The connectivity aspect of applications allows users to immediately access and share up-to-date and appropriate information with each other which can enable a change in behaviour. The connectivity aspect also applies social influence strategies like social learning, according to Coşkun & Erbuğ. They continue that the “smartness” of applications can offer a better perception of users and of the context in which persuasion happens.

Coşkun & Erbuğ (2014, 229) conclude that while applications have great capacity to initiate pro-environmental behaviours, we must see behavioural change as a long-term process needing encouragements to maintain it. For the sake of sustainability, positive change must be ensured, and therefore, applications need to encourage users to sustained usage. Regarding this Coşkun & Erbuğ proposes a ‘Model for sustained usage of smartphone applications as persuaders’ which can be seen from the figure below. The model is used to elaborate on how to contribute to sustained usage and how to influence users.

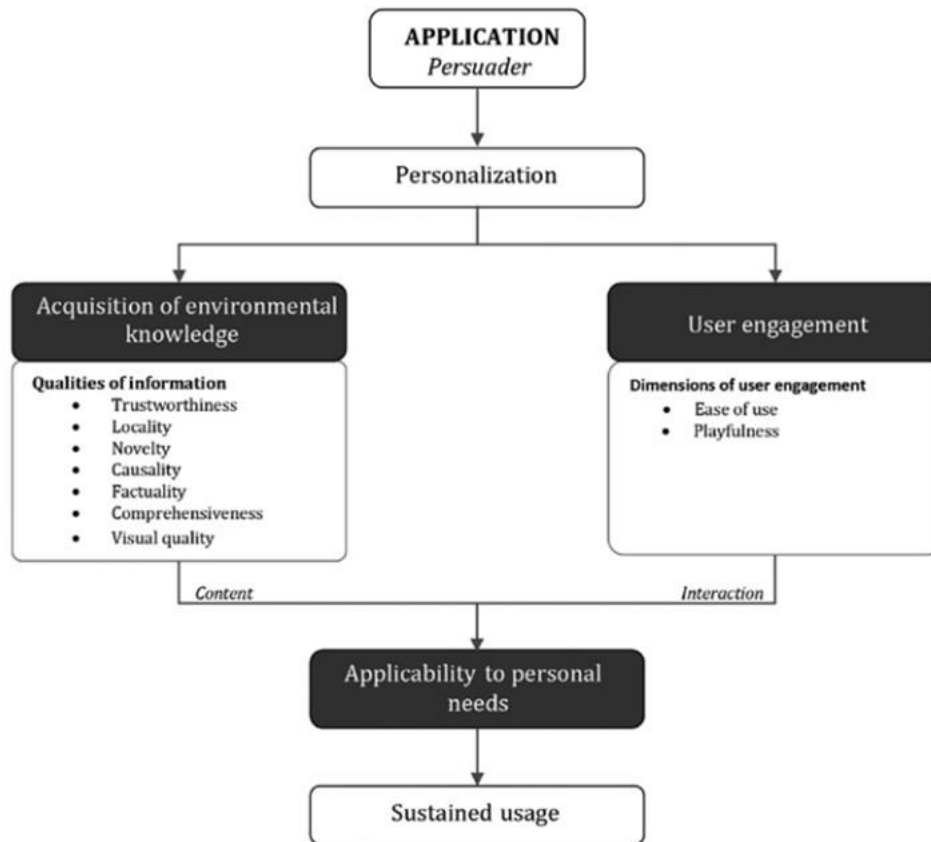


Figure 2: Model for sustained usage of smartphone applications as persuaders by Coşkun & Erbuğ (2014, 229).

In short, the 'Model for sustained usage of smartphone applications as persuaders' suggests that user diversity should be considered when designing applications because people's differing attitudes etc. affect how they encounter and react to persuasive attempts. The more the users can adapt the application to their lifestyle the more likely it will promote and maintain pro-environmental behaviours. (Coşkun & Erbuğ 2014, 229.)

5 Methodology

As mentioned before, this thesis is research-based which means that its purpose is to find out information regarding a specific topic. Adams, Khan & Raeside (2014, 1-4) explain, that research is about identifying a research problem, which in this case concerns whether the 'Martat' application promotes the accessibility of environmental attitudes. Then one must understand the problem, which is why theoretical framework is studied around the subject. One must know where to go for information, who to ask for it and what kind of questions to

ask. Furthermore, Adams, Khan & Raeside continue, that when research is related to human behaviour, research environment is difficult to monitor which means that only few aspects are under the control of the researcher rendering this kind of research to be almost experimental.

5.1 Research question

Studying appropriate research methods for social and behavioural sciences dealing with people, their society, culture, and daily life, I concluded that a combination of interviews and surveys, more specifically questionnaires, as a data collection method, would be the best approach to my research problem. To analyse the data gathered, I chose content analysis method. Regarding the research problem, my research question is:

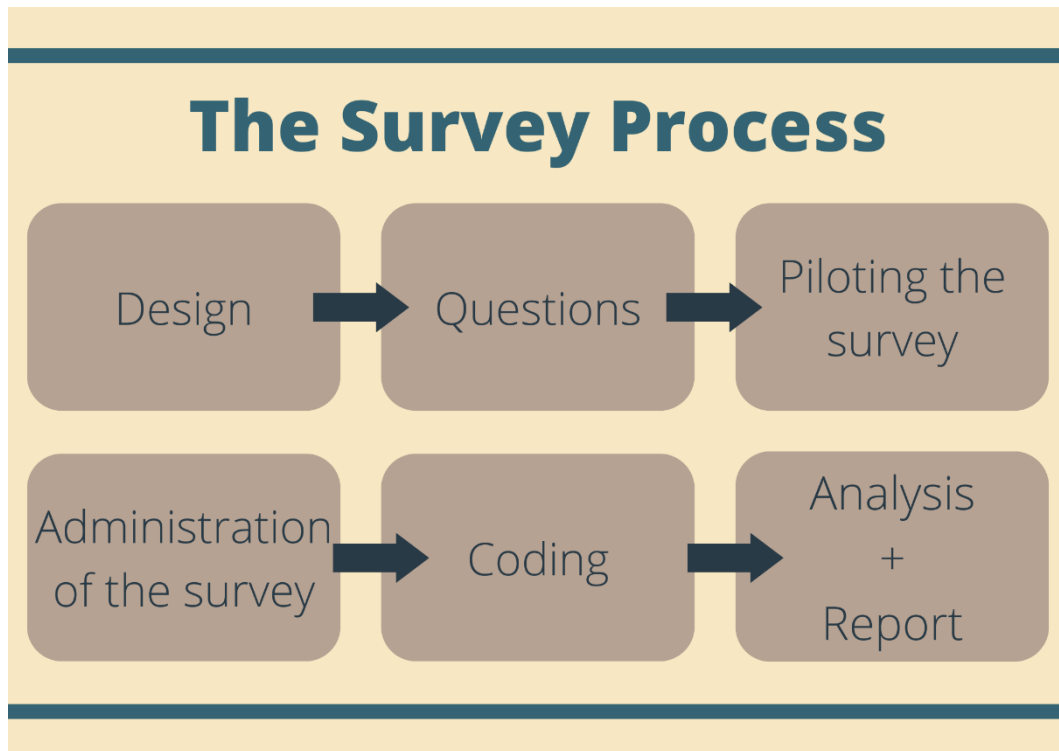
- *Does ‘Martat’ application promote the accessibility of environmental attitudes for its users?*

The research question was formed with my working life representative Martha organisation as they want to know whether their application helps people to act more sustainably in their life. Martha organisation wants to know whether the application encourages the users to keep making sustainable choices or if for some it also helps to change behaviour. They want to know what content from the application acts as this kind of incentive and why and how to improve the influence and effectiveness of the application.

5.2 Data collection

One of the data collection methods will be a survey, and I chose this method because with it I have a better chance of reaching more people. According to Tuomi & Sarajärvi (2013, 72-73), the purpose of a survey and an interview is to directly ask respondents questions as we want to know what they think and why they act the way they do. However, Tuomi & Sarajärvi continue that through a questionnaire we are assuming the respondents are able to, want to, and know how to express themselves in a written form accordingly. This can affect the response rate to a survey.

Moreover, I chose a survey because using secondary data does not work in this research as the ‘Martat’ application is newly launched and does not yet have all the required data available. A survey includes asking people questions, in this case via a questionnaire. This will be a small-scale survey limited to ‘Martat’ application users as their answers are the ones needed for this research. It must be acknowledged, as Adams, Khan & Raeside (2014, 118) warn, that while a questionnaire is the most popular survey option among researchers it is also over-used, and therefore it might be difficult to find individuals to participate. Furthermore, Adams, Khan & Raeside highlight the importance of carefully planning the survey before implementing the data collection as it all affects how well data will be gathered and analysed.



Picture 5: The Survey Process as explained by Addams, Khan & Raeside (2014, 119).

Above can be seen the survey process which includes the design, questions, piloting the survey, administration of the survey, coding, and analysis as well as reporting, according to Adams, Khan & Raeside (2014, 119). They explain that when a survey's purpose is to find out about attitudes, the design becomes more complex. However, there are general principles to follow, and these are: to keep the survey short and with an open layout, with clear and understandable questions, give instructions, have consistent scales, and straightforward return system. The questions should be formed so that they are relevant to the research objectives and must be backed up with literature, that is with the theoretical framework. Questions can be both open and closed questions and there are pros and cons to both. As I am looking for answers regarding people's attitudes, the questions must be carefully formed so that participants have enough freedom to express themselves but are not troublesome to answer and that coding them would not be too time consuming. (Adams, Khan & Raeside 2014, 121-126.)

According to Adams, Khan & Raeside (2014, 127), all surveys should be piloted before the actual administration of the survey. This lets the researcher know whether the questions are understandable and the survey completable. The actual administration of the survey will be done via the 'Martat' application, as I agreed with Martha organisation representative, because the participants are nation-wide application users not tied to a specific location. Coding, and data input, refers to the transformation of data from the completed questionnaires to, for example, Microsoft Excel, from where the analysis of data can begin (Adams, Khan & Raeside

2014, 133). The final part of the survey process, analysis, and reporting will be discussed in the chapter 5.3.

The other data collection method is interviews, and I chose this method because it gives an in-depth knowledge of people's behaviour or feelings, according to Adams, Khan & Raeside (2014, 97), which are at the core of attitudes as explained in chapter 2 - Environmental attitudes. Interviews can be in-sample interviews if conducted on a person who also participated on the survey, or out-of-sample interviews when those who did not participate on the survey were reached this way to get further knowledge (Adams, Khan & Raeside 2014, 145). The plan is to ask five participants to attend the interview via the survey form and the interviews will be structured.

5.2.1 Questionnaire

According to Tuomi & Sarajärvi (2013, 75), all questions asked in the data collection must be justified within research. As explained in chapter 2.4 - Measurement of attitudes, I will ask about participants' age, their level of environmental concern, their personality and values, their experience with nature, and their environmental knowledge, as this information is related to one's environmental attitudes and behaviour. I have divided the questionnaire to three sections which are general questions, specific questions regarding the 'Martat' application, and specific questions regarding environmental attitudes. As the 'Martat' application operates in Finnish, I designed the questionnaire in Finnish and so the following is a translation of it. The original Finnish version of the questionnaire can be found from the appendices.

The general questions go as follows:

1. How old are you?
Options: Under 18, 18-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80 or older.
2. How concerned are you about the change in the environment and climate change?
(e.g., of the loss of biodiversity, of the overconsumption of natural resources, etc.)
On a scale of 1 to 5: 1 - Not at all, 5 - Extremely concerned.
3. How open are you to new experiences in your opinion? (e.g., do you gladly participate in different happenings, do you gladly try out a new hobby, do you gladly try new recipes, etc.)
On a scale of 1 to 5: 1 - Not at all, 5 - Extremely open.
4. Do you believe that, with your actions, you can make a difference regarding environmental protection?
On a scale of 1 to 5: 1 - I don't believe, 5 - I strongly believe.
5. What do you do in the nature?
In this part nature refers to forests and parks as well as to one's own yard.
Multiple options: I go hunting, I pick up mushrooms and/or berries, I do nature

photographing, I make art in the nature, I bicycle/walk in the nature, I do off-road driving (with a motor vehicle).

6. Do you follow the news?

Options: Daily, Once a week, Less often, Other.

7. Do you watch TV or other streaming services (Netflix, HBO, YouTube, etc.)?

Multiple options: I watch nature documentaries, I watch the news, I watch series and movies, I watch science shows, Other.

Specific questions regarding 'Martat' application:

8. Is knowledge about being environmentally friendly easily accessible in the 'Martat' application in your opinion?

On a scale of 1 to 5: 1 - Not easily accessible, 5 - Extremely easily accessible.

9. How has the 'Martat' app helped you to act more environmentally friendlier?

Free written answer.

10. Has the 'Martat' app changed your perception towards the environment?

Free written answer.

11. Has the 'Martat' app increased your knowledge on environmental protection?

On a scale of 1 to 5, 1 - Not at all, 5 - A lot.

12. 'Martat' application gives an opportunity for a personalised learning:

On a scale of 1 to 5: 1 - Not at all, 5 - Extremely well.

13. 'Martat' application is engaging:

On a scale of 1 to 5: 1 - Not at all, 5 - Extremely engaging.

14. Regarding two previous statements: **How** does the 'Martat' app provide a platform for a personalised and engaging environment to learn and participate?

Free written answer. (optional)

15. Have you used the discussion forums on the 'Martat' application? What do you think about them?

Free written answer.

16. Do you trust the content of the 'Martat' application?

Options: I trust everything, I trust content only Marthas have added, I am not sure of the content, Other.

17. Do you find the 'Martat' application visually pleasing?

On a scale of 1 to 5, 1 - Not at all, 5 - Extremely pleasing.

18. Is the 'Martat' application easy to use?

On a scale of 1 to 5, 1 - not at all, 5 - extremely easy to use.

19. How well does the 'Martat' application provide useful tips and advice for you?

On a scale of 1 to 5, 1 - Cannot find anything useful, 5 - Can find extremely well.

20. How often do you use the 'Martat' application?

Options: Daily, Once a week, Once a month, Less often, Other.

Specific questions regarding the ‘Martat’ application aim to get answers to whether the application has enabled respondents to change their behaviour towards a more environmentally friendly one. Furthermore, these questions are based on the chapter 4 - digitalisation. As mentioned there, according to Coşkun & Erbuğ (2014, 216-217), having immediate access to information and to share information can enable change in behaviour. Furthermore, Coşkun & Erbuğ (2014, 229) refer to the ‘Model for sustained usage of smartphone applications as persuaders’, see figure 2, which demonstrates how applications can be a cause for change when in continuous usage. Regarding this the application must be considered visually pleasing, easy-to-use, and the content must be deemed trustworthy, and they must satisfy users’ personal needs.

Specific questions regarding environmental attitudes:

21. What do you think when you think about the word environment?
Free written answer.
22. How do you feel when you think about the word environment?
Free written answer.
23. Based on those thoughts and feelings, what kind of environmentally friendly choices and everyday actions do you do?
Free written answer.
24. What other ways to protect the environment can you think at this moment?
Free written answer.
25. Contact information for interview:
Free written answer. (optional)

I ask these specific questions because attitude consists of cognitive (about thinking), affective (about feeling), and conative (about acting) aspects, as explained in chapter 2 - environmental attitudes. Therefore, to learn about the respondents’ environmental attitudes, I must study whether the object ‘environment and concern for it’ is readily available in their mind or whether it is a completely new thing which then means they have not formed a strong attitude towards it. Likewise, environmental knowledge is the foundation to environmental attitudes and behaviour, thus I want to know whether the respondents already have environmental knowledge and whether the application further enables the access to it.

5.2.2 Interview questions

1. How do you connect with nature? Does the app bring new awareness on how to strengthen your connection with nature?
2. How often do you make environmentally friendly actions? Does the notification feature from the application encourage you to act more environmentally friendlier? How?

3. What does environmental protection mean to you? Has your view on environmental protection changed since the use of the application?
4. What drives you to act more sustainably in your everyday life? Does the application enable you to do that?

The interview questions aim to further clarify whether the respondents have strong environmental attitudes and whether the application enables the accessibility to them (further strengthens them). Open ended questions enable the respondent to answer freely instead of being directed to a specific answer which is against the ethical considerations, according to Adams, Khan & Raeside (2014, 21) in the coming chapter 5.4 - Ethical considerations.

Moreover, according to Tuomi & Sarajärvi (2013, 73), the benefit of an interview is that it is flexible, during an interview the interviewer has an opportunity to clarify questions and have a discussion with the respondent. The point is to have as much information on the matter as possible, regarding this it is beneficial to send the questions to the respondent beforehand for them to get acquainted with them before the actual interview. As I am asking those willing to participate in the interview to leave their contact information, I can send the interview questions to them via email beforehand.

I collected my data from the users of 'Martat' application. The online questionnaire was published in the 'Martat' application's frontpage for 8 days. Participants for the interviews were reached by a feedback form issued by Martha organisation as well as through the online questionnaire. I sent an email to 50 people asking if they would be interested to participate in the interview. In the email, I included the interview questions so that they could think about their answers beforehand and asked whether they would rather participate in the interview via a phone call or a Teams-meeting.



Figure 3: Sampling of participants

As can be seen from the figure above, 56 people answered the questionnaire and 6 people were interviewed for additional information. All the interviewees preferred a phone call and before starting the interviews I reminded them of the anonymity of their answers in the final analysis and of their right to cancel the interview at any time. With the permission of the interviewees, I also recorded the audio of the interviews to my computer so that I would not have to take notes during the process. The transcribed interviews amounted to 8 pages of text with Trebuchet MS font, font size 10 and 1,5 line spacing.

5.3 Data analysis

I chose qualitative analysis method, to analyse the data I gathered, but the analysis process also includes elements from quantitative analysis method. I chose these methods because the questionnaire and interviews are a combination of closed and open questions therefore including numbers and written text, i.e., including quantitative and qualitative data. For quantitative analysis, I will use different percentages and charts from Google Forms as well as make a Pivot Table analysis myself as I wish to know whether age affects environmental concern.

According to Adams, Khan, & Raeside (2014, 169-171), descriptive quantitative analysis helps a researcher to summarise and understand data. This can be done on a spreadsheet like Microsoft Excel to draw statistical summaries from the data such as bar charts, frequencies, and tables to name a few. Different data are transferred to a Pivot Table, like age groups to rows and concern for the environment to values, to analyse them. As the table 1 demonstrates, I used a value 'average' to calculate the average of each age group's concern for the environment on a scale of 1 to 5. Otherwise, Google Forms provides ready calculated frequencies of the data and thus I will be using those during my analysis phase.

Age group	Average concern for the environment
18-29	4,6
30-39	3,8
40-49	3,8
50-59	4
60-69	4,1
70-79	4,5
Grand Total	4,1

Table 1: Example of Pivot Table average calculation

According to Tuomi & Sarajärvi (2013, 95), a qualitative analysis is often said to be inductive or deductive. Inductive analysis is an approach which strives to a reasoning logic where data is analysed from individualistic to a more general. One of qualitative analysis methods is data-driven content analysis where data is first *reduced*, which means to simplify it, then it is

clustered, which means to group simplified data, and lastly to *abstract* it, which means to find common concepts.

Original statement	Reduced statement
"It is important. Important natural resources for us are found from the nature and actually because of that everyone must consider environment so that we would not destroy all living things."	Importance Awareness of the environment Clean nature should be protected
"It means a lot. And preferably all household waste should be sorted, and no toxic waste be dumped in the nature and to try to behave decently."	Significance Keep nature clean Sorting waste Toxic waste away from nature
"It is greatly important issue in many ways. I enjoy eating meat but have increased using vegetables and other proteins. Have changed habits with small actions but environmental protection in a larger scale such as forest industry is something that an individual cannot influence, that it's political. There should absolutely be more nature conservation areas if we are thinking about biodiversity and that species would not go disappear."	Importance Considering own actions Changing habits with small actions Individual actions not always enough Nature needs more protection
"A lot, a lot of good. I want the nature and environment to be protected."	It means a lot of good
"It is a big and important issue."	Importance

Table 2: Example of reducing

According to Tuomi & Sarajärvi (2013, 109), data which will be reduced can be transcribed interviews or other documents which will be reduced so that any information that is not useful for the research will be deducted. I studied the answers and removed any information which was not useful for my research. Then I reduced original statements to reduced ones, an example of which can be found from table 1 above. The example is translated to English but otherwise I worked on the analysis in Finnish to avoid any misinterpretations during the process.

Reduced statement	Sub-category
Importance It means a lot of good Significance	Importance
Keep nature clean Clean nature should be protected Sorting waste Toxic waste away from nature	Actions to keep nature clean
Considering own actions Awareness of the environment Changing habits with small actions	Awareness
Individual actions not always enough Nature needs more protection	Realisation of own limits

Table 3: Example of clustering

Tuomi & Sarajärvi (2013, 110) explain that during the clustering part reduced statements are carefully examined and similarities or differences are looked for. This means that individual actions are grouped together under more general concepts. Table 3 shows an example of clustering.

Sub-category	Main findings
Importance Realisation of own limits	The importance of environmental protection and how it should be considered on all levels
Actions to keep nature clean Awareness	Awareness on the topic and how own actions affect environmental protection

Table 4: Example of abstraction

Abstraction means that important information regarding the research is selected, and theoretical concepts and conclusions are made (Tuomi & Sarajärvi 2013, 111-112). Table 4 shows an example of how I found out how environmental protection is perceived by the participants which describes their environmental attitudes. Then, analysing other questions, I can find out whether the 'Martat' application had any part in it. This way content analysis method gives answers to the research question by combining concepts, interpreting, and deducting them, as Tuomi & Sarajärvi explain.

5.4 Ethical considerations

It is a researcher's responsibility to conduct research honestly and with integrity as Adams, Khan & Raeside (2014, 21) highlight. They point out that if research is not done ethically, during the whole process of the research, it will fail. According to Adams, Khan & Raeside, to do

research ethically means that one must not be selective in sampling, participants' response rates must be accurately reported, data must not be made up but correctly collected, and when acquiring information leading questions are prohibited. Also, one must not falsify results to fit one's own conclusions. During analysis, data should not be removed, nor biased or inappropriate conclusions made, furthermore, if information is removed it must be explained and justified.

Plagiarism is part of unethical research and to avoid it I use Laurea's referencing guidelines to indicate when I am referring to whose research and which publication. Most of the pictures used in this thesis are of my own design created with Canva-application. If I have copied a figure from someone else, I am referring to the original one according to Laurea's referencing guidelines. As data will be collected from people, participants must be informed of the nature of my research and their consent to gather information must be obtained before conducting the collection. Participants' data must be stored in confidentiality which is why I will be storing data on my computer to which no one else has access to. Moreover, participants' anonymity must be ensured when applicable, and they have the right to withdraw their answers at any time. No one should be coerced to participate not even in the form of incentives or bribes. (Adams, Khan & Raeside 2014, 22-23.)

5.5 Reliability and validity

Reliability of a research must be assessed to avoid any mistakes in the process, as Tuomi & Sarajärvi (2013, 134-136) write. They explain that objectivity is one aspect that should be distinct from reliability as the researcher's own background inevitably affects how they interpret information. Adams, Khan & Raeside (2014, 245-246) further explain that reliability of the research means that the measurements used should be consistent. Meaning that if the measurements are used several times and the results are the same, the measurement method is then reliable. However, this does not mean that the results are valid because while the method can be consistent it can also be incorrect. In the case of surveys, I must make sure the concepts are clear and not affected by my own views.

Validity, on the other hand, determines whether I have researched what I was supposed to (Tuomi & Sarajärvi 2013, 136; Adams, Khan & Raeside 2014, 247). This is enabled by openly explaining my research steps so that others can understand how the research is conducted and make their own assessment, as Tuomi & Sarajärvi (2013, 141) explain. Anyone who uses the 'Martat' application had a chance to participate in the survey. The participants for the interviews were selected randomly from those who showed interest to take part in it. I made sure to analyse their answers anonymously and removed any information which could have identified them. Considering that 56 people participated on the survey and the application has 200 active users, according to Salminen (2022. Pers.com.), the answers represent only ~28% of the active application users.

6 Results

In this chapter, I will describe my main findings from the questionnaire starting from the background information regarding participants, continuing to the ‘Martat’ application specific information, and to the environmental attitude specific information. As I got a lot of data from the questionnaire, I will not include all the figures in the results but will address them in written form to make the chapter more concise. Then I will describe my findings from the interviews which will further seek to clarify participants’ environmental attitudes and ‘Martat’ application’s relation to them.

6.1 Questionnaire results

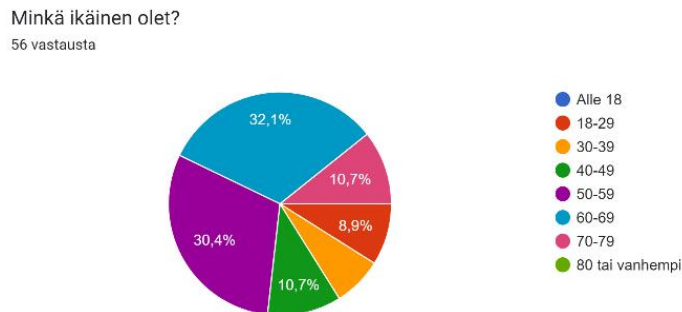


Figure 4: Age of the participants

Majority of the participants were 60-69-year-olds (32,1%) and 50-59-year-olds (30,4%) as can be seen from the figure above. 10,7% of the participants were 70-79-year-olds and another 10,7% of the participants were 40-49-year-olds. 18-29-year-olds and 30-39-year-olds amounted to 8,9% and 7,1% of the participants respectively. After analysing the answers by age groups there were not that significant differences between age groups regarding concern for the environment. Age groups 18-29 and 70-79 were with the highest concern but on average all participants showed concern for the environment. The age groups’ average concern for the environment, on a scale of 1 to 5, was at least 3,8 or higher.

Kuinka avoin mielestäsi olet uusille kokemuksille? (esim. lähdetkö mielelläsi tutustumaan erilaisiin tempauksiin, lähdetkö mielelläsi kokeilemaan uutta ...usta, kokeiletko mielelläsi uusia reseptejä, yms.)
56 vastausta

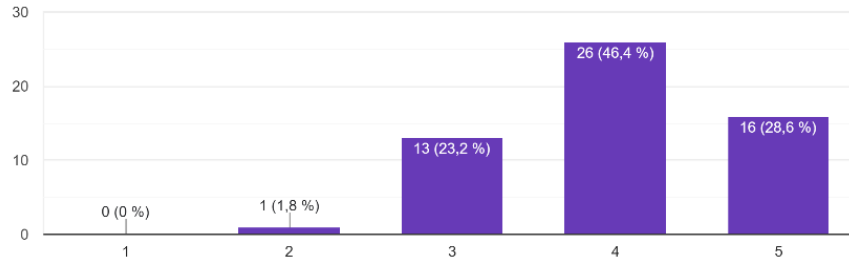


Figure 5: How open are you to new experiences in your opinion?

Uskotko, että voit omilla teoillasi vaikuttaa ympäristön suojelemiseen?
56 vastausta

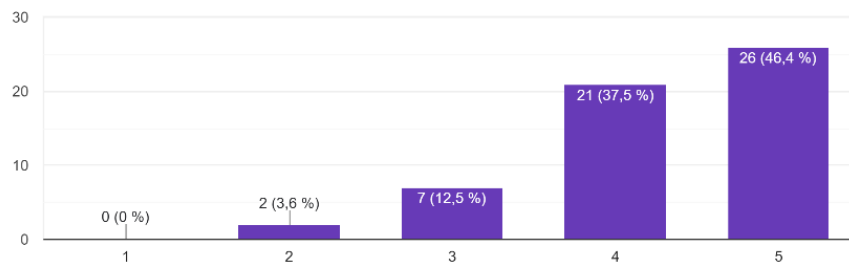


Figure 6: Do you believe that, with your actions, you can make a difference regarding environmental protection?

Figure 5 shows how 46,4% of the participants were open to new experiences and 28,6% were extremely open. Figure 6 illustrates that majority, 83,9%, of the participants felt they could make a difference with their own actions. Regarding 'direct experience with nature', 50 participants engaged in non-motorised activities, 41 in non-consumptive activities, and 41 in consumptive activities. Out of these 41 participants, who engaged in consumptive activities, reportedly two engaged *only* in consumptive activities.

Seuraatko uutisia?
56 vastausta

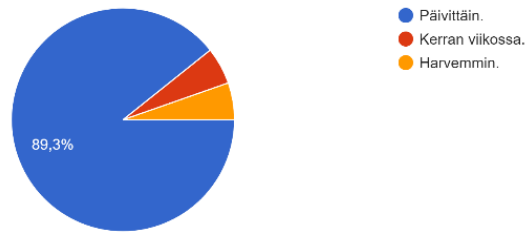


Figure 7: Do you follow the news?

As can be seen from the figure above, 89,3% of the participants followed the news daily. Moreover, 66% of the participants enjoyed watching both series & movies and either nature documentaries, science shows, history shows or the news. Nine participants watched only series & movies and ten participants watched only nature documentaries, science shows, history shows, or the news.

Onko ympäristöstävällisyyteen liittyvä tieto mielestäsi helposti saatavilla Martat-sovelluksessa?
56 vastausta

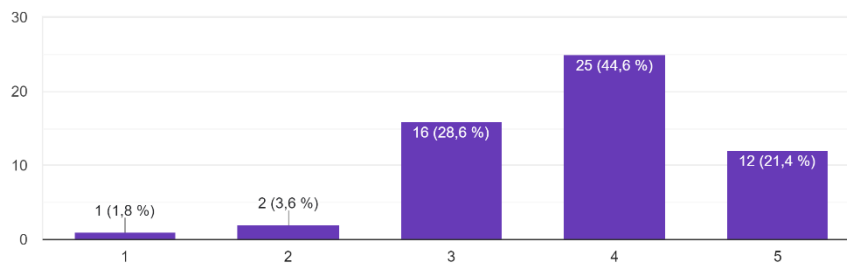


Figure 8: Is knowledge about being environmentally friendly easily accessible in the 'Martat' application in your opinion?

As figure 8 shows, 66% of the participants felt that environmentally friendly information was easily accessible to them in the application. Regarding how the application has helped them, 26 participants reported that advice from the application has helped them act more environmentally friendlier. More specifically, participants had received advice on ecological cleaning, reducing food waste, recipes to use local ingredients, mending and sustained usage of products, recycling, gardening, and reducing consumption. Moreover, eight participants reported that they felt encouraged to start behaving more environmentally friendlier or to keep behaving environmentally friendlier. In addition, six participants said that the application had

increased their awareness. However, 30% of the participants reported that the application had not helped them, they did not know if it had, they had not used it, or they left a blank answer.

Participants were split approximately 60-40 in their answers whether the application had changed their perception towards the environment. 60% said it had not changed their perception, some stating that they already had a strong view and some stating that it did not change but it strengthened with the usage. Remaining 40% felt the application increased awareness and appreciation, strengthened, and encouraged their own beliefs, and activated them to do something.

Onko Martat-sovellus lisännyt tietämystäsi ympäristön suojelusta?
56 vastausta

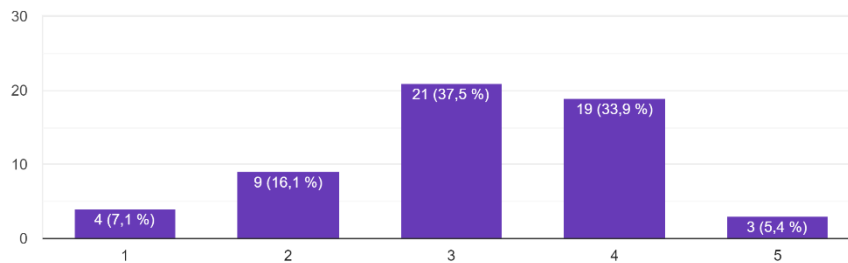


Figure 9: Has the 'Martat' app increased your knowledge on environmental protection?

As can be seen from the figure above, 39,3% of the participants felt that the application had increased their knowledge and 23,2% felt it had not while majority 37,5% fall somewhere in between. This corresponds with the previous question so that while many felt that the application had not changed their perception it had increased awareness.

Martat-sovellus antaa tilaisuuden yksilölliseen oppimiseen
56 vastausta

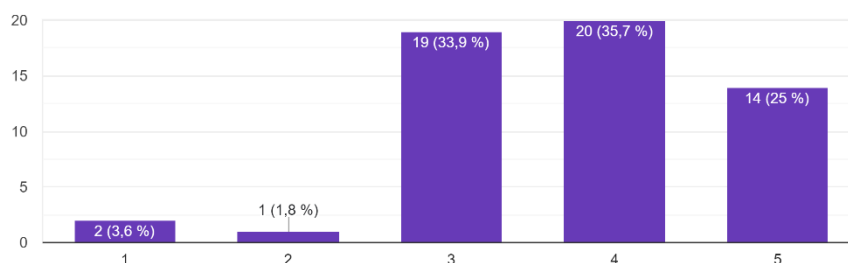


Figure 10: 'Martat' application gives an opportunity for a personalised learning

Martat-sovellus on mukaansatempaava
56 vastausta

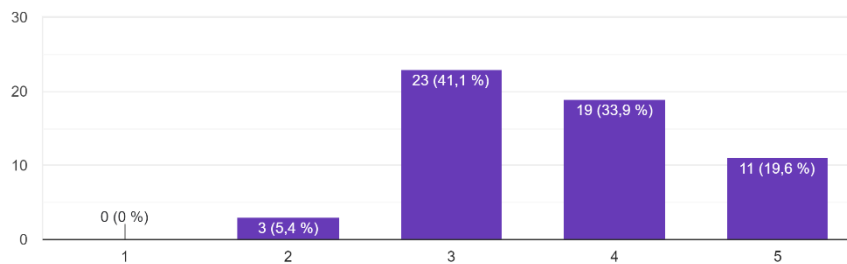


Figure 11: 'Martat' application is engaging

Figures 10 and 11 demonstrate that majority of the participants found that the application provided a platform for a personalised and engaging environment. Moreover, 32 out of 40 answered question "How does the 'Martat' app provide a platform for a personalised and engaging environment to learn and participate?". The main findings from these answers are that the 'Martat' application provided a platform for a personalised and engaging environment through advice, tips, and recipes that a person could find and follow based on their interest. As well as, through the discussion forums and providing current topics where information was given without blaming.

Regarding the discussion forums, 32 participants had not used them and 23 had. Out of the 23 many reported having found relevant tips, nice atmosphere, and one wrote that the different categories were a bonus, and it was distinctly divided into sections. Others mentioned that the discussion were not very active, and conversations went slowly. Out of those who had not use it one said they did not personally need it, and another felt it was difficult to find.

Luotatko Martat-sovelluksen sisältöön?
56 vastausta

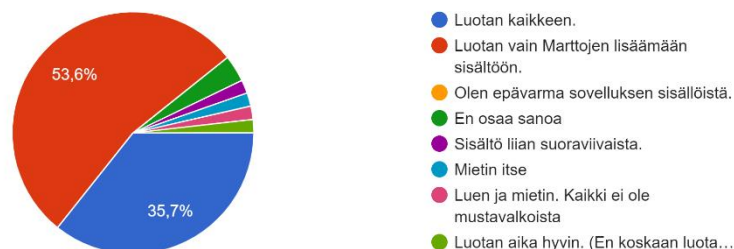


Figure 12: Do you trust the content of the 'Martat' application?

The figure above shows that 53,6% of the participants trusted the content Marthas had added to the application and 36,7% trusted all the content found from the application. Remaining 9,7% of the participants were either unsure about the content, read and thought about the content, did not know, thought the content was too straightforward, or that they trusted it quite well but not entirely. 78,6% of the participants found the application visually pleasing while three participants reported that they did not. In addition, 83,9% of the participants felt that the application was easy to use while four participants reported that it was not. 71,4% of the participants felt that the application provided useful tips and advice personally for them and 25% of the participants were somewhere in the middle. 3,6% reported that the application had not given much advice for them. The figure below shows that 10,7% participants used the application daily, 57,1% used it at least once a week, 17,9% used it at least once a month, and the remaining 14,3% either used it less often, used it many/few times a week, or whenever they had time.

Kuinka usein käytät Martat-sovellusta?
56 vastausta

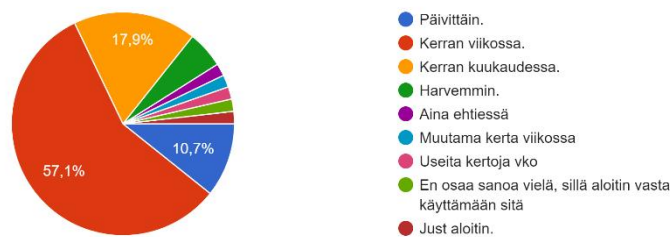


Figure 13: How often do you use the application?

Results show that thoughts regarding the word environment mostly involved around nature and closely second were thoughts on overall awareness, such as the impact of own choices, ongoing crisis, and loss of biodiversity. Otherwise, all surroundings and own living environment were mentioned. 55% of the participants reported having positive feelings towards the word environment such as feelings of peacefulness, warmth, gratitude, and joy. Many of those, however, reported having divided feelings towards the word environment and 41% of all participants had feelings of worry, anxiety, and horror as well as five people reported having a strong sense of responsibility.

Based on these thoughts and feelings 95 % of the participants were making environmentally friendly actions. These actions mostly consisted of overall reduced consumption and choosing environmentally friendlier products. 36 participants mentioned recycling, sustained usage of products, and using second-hand products. Other actions involved changes to diets, preferring environmentally friendlier transportation options, or reducing food waste as well as saving energy and water. 12 participants reported growing their own food, composting, or reporting

invasive alien species. Otherwise, minimal living, for example, the size of family or housing were mentioned. This concludes that while participants had differing thoughts and feelings concerning the word environment, ranging from joy to anxiety, majority had made actions towards protecting it.

6.2 Interview results

Moreover, results from the interviews correspond with the results from the survey. The following quotes are picked from the interviews and translated to English. The interviewees had a strong connection with nature stating walks in nature as daily activities and that nature was giving balance to the hectic city life.

“...I move in nature almost daily and be in connection with nature like that, but I feel like nature is rather making contact to me.”

“...I think it’s like that that when I go there to the forest myself for example. Sometimes there is this feeling that of course being in the city for a long time it starts to give anxiety. Then you go there to the countryside and seek quietness and balance to this buzz that the city has.”

In addition, fishing, picking berries and mushrooms, enjoying the sea and forest, and walks with dogs were mentioned. Moreover, to one interviewee connecting with nature also meant treating it nicely and keeping it clean. Regarding whether the application had helped the interviewees, four replied that it had not brought new insights or that they already had environmental awareness before using the application. One replied that they used the application for nutritional purposes rather than for environmental aspects.

“I don’t know if it has brought new awareness but it like keeps it up as it has these seasonal aspects and what is currently happening in the nature so it kind of brings maybe also new. Or at least reminds that it is time for this again.”

Two interviewees told that the application kind of brings new awareness to strengthen their connection with nature with the current topics and advice. Regarding environmentally friendly actions, the interviewees reported making those actions daily.

“Every day in my opinion. I recycle everything and my clothes are some 30-40 years old, so I use them up. I don’t buy anything unnecessary, or junk and I really sort. Do I have like 6-7 trash bins in both of my houses that everything is recycled that is possible. And other stuff is taken to recycling centre but let’s say that this environmental friendliness goes also to the investment side. That all the investments that I’ve made consider environment and other sustainability questions...”

Those daily activities include recycling, which was mentioned by three of the interviewees, and two mentioned they do not litter and they pick up trash from nature. Otherwise, sustained usage of clothing, reduced consumerism, sustainable investments, following current climate discussion, and ecological cleaning habits were mentioned. However, the notification aspect of

the application was not familiar to the interviewees, or they visited the application so often that they kept up to date without notifications.

“It is greatly important issue [...] in many ways. [...] I enjoy eating meat but have increased using vegetables and other proteins. [...] Have changed habits with small actions but environmental protection in a larger scale such as forest industry is something that an individual cannot influence, that it's political. [...] There should absolutely be more nature conservation areas if we are thinking about biodiversity and that species would not disappear...”

The above quotation showed the importance of environmental protection and actions from one of the interviewees. Others also highlighted the importance of it and added awareness to the environment, keeping nature clean and protected, and sorting waste as actions of environmental protection.

“No, the application, in my opinion, has not influenced honestly saying. That I surely get my information elsewhere. Like from Hesari and so forth.”

“Maybe I have had more information like the Baltic Sea Day. [...] So yes, it has brought some new information and energy saving advice and such.”

Five of the interviewees reported that the application has not changed their view on environmental protection saying that they got their information elsewhere, they rarely went there, or they went to see advice and tips they have used already before. One said that they may have received more information from there and another said that it had made it more visible.

“...I see it so that it is important to protect the environment to the future generations and that everyone can do some things. But that one person's actions don't influence much but then if many would do them then we would get to a better result. But I for one have thought about those environmentally friendly alternatives when possible. For example, when doing decisions regarding the household.”

“I want my children to have nature left, and grandchildren.”

Three interviewees mentioned that leaving a liveable place behind for future generations were their drive to act more sustainably in their everyday life. One interviewee mentioned that it could have also been society's pressure but that they had awoken to the vulnerability of the environment. In addition, one person reported that having advice from 'Martat' application made them follow a different course of action.

“Somewhat yes, [...] I think that 'Martat' is that kind of good mood application and since it is this nature and environmentally friendly it encourages to do good together.”

“No, it doesn't anything. No. We are both a little bit like so that we protect all of the environment. We go somewhere and do not leave anything there that does not belong there and all this.”

Regarding whether the application had helped the interviewees to act more environmentally friendly in their life, they responded that they already have been acting that way but some advice and tips from the application were good to share with their children. Many said no first but then mentioned that the advice they looked for had helped them regardless of whether they knew it already or not. One said that it was a good reminder to do this and that and another mentioned it encouraged to do good together as shown in the above quotation.

7 Conclusions and discussion

In conclusion, the results show that the participants demonstrated strong environmental concern indicating that they had pro-environmental attitudes. When grounding the findings on the works of Gifford & Sussman (2012, 70), figures 5 and 6 from previous chapter further illustrate that the participants were likely to demonstrate higher levels of environmental concern based on their openness to new experiences and self-efficacy. On the other hand, according to Gifford & Sussman, engaging in consumptive activities rather than non-consumptive activities in nature is often associated with lower levels of environmental concern. 41 participants participated in both non-consumptive and consumptive activities. There were two participants who were engaging *only* in consumptive activities but demonstrated concern for the environment in the direct question about environmental concern regardless of their experience with nature.

Regarding engagement to environmental concern broadening knowledge acquisition, 84% of the participants can be said, according to Gifford & Sussman (2012, 70-71), to have been broadening their knowledge. Furthermore, Geiger, Geiger & Wilhelm (2019) researched the significance of general and environmental knowledge on environmentally significant behaviour and their results show that both general and environmental knowledge led to environmentally friendly behaviour. Most of the participants actively followed the news and watched either nature documentaries, science shows, history shows as well as series and movies. According to the information from Geiger, Geiger & Wilhelm it could be said that the participants general as well as environmental knowledge intake further impacted their environmentally significant behaviour positively. These findings conclude that 'Martat' application users actively acquired knowledge which indicates pro-environmental attitudes.

Furthermore, the results demonstrate that majority of the participants trusted the content of the application, found the application visually pleasing and easy-to-use, found useful information specifically for their needs, and actively used the application. According to Coşkun & Erbuğ (2014, 229), these aspects indicate a chance for sustained usage of the application which means that pro-environmental knowledge keeps being accessed providing an opportunity to improve and maintain environmental attitudes.

Otherwise, my research showed that changing human behaviour is difficult as also mentioned by Lenna et al. (2022). Participants mostly reported on actions they already made and only few mentioned that the application has activated them to do something. However, it is evident that while the information on the application was either new or known for the participants, it helped them to maintain their environmentally friendly behaviour. From the reasons on what strived the participants to act environmentally friendly, can be seen that gratitude towards nature and awareness of its importance were the main reasons for their actions. This corresponds to the statement by Lenna et al. that those reasons should be the encouragement to behave environmentally friendlier.

Mobley, Vagias & DeWard (2009, 436) mentioned that specific attitudes can predict specific behaviour and as much my research demonstrates. Focusing on environmental concern and environmentally friendly behaviour, I got to the results that most of the participants had pro-environmental attitudes and great majority was acting environmentally friendly based on these attitudes. However, one person said that, in their opinion, they did too little out of laziness. This could correspond with the fact that empathy can paralyse a person to do nothing regardless of their pro-environmental attitudes, as Lenna et al. (2022) explain.

As research shows, attitude accessibility includes having knowledge of the attitude object, in this case about environmental concern and protection. According to Oksanen (2017), one way for the knowledge to grow is when discussion on the object is based on scientific foundation. While the discussion forums were relatively new to the participants, as 32 participants had not used them, I found that those have the potential to spread targeted knowledge to interested parties. As even informal discussions on important topics can spread knowledge, the discussion forums have the means to encourage this.

In addition, Spencer et al. (2010, 95), explained that as humans are social beings, they are likely to make certain actions to feel belongingness in a group. This could mean that the participants were making environmentally friendly actions because it is considered socially desirable. Moreover, if the participants have had a long history with Martha organisation, they might want to follow the guidelines set out by Marthas to feel included in the group in the future as well. On the other hand, one person mentioned that they have a long history with Martha organisation, and they felt that the values Marthas present correspond with their own values and that was their reason for staying in the group. In regard to this, also Vainikka (2022) referring to the work of Rapley in 2012, explains that people are influenced by the opinions of other likeminded people. Therefore, I would say that to feel belongingness in a group, it goes both ways, the values of the group must represent the values of oneself but also the group has the possibility to change one's values to feel included.

Moreover, looking at the 'elaboration likelihood model' by Petty and Cacioppo mentioned in Stroebe (2008, 140), strong arguments and predominantly positive thoughts are likely to result in change of attitude. Many participants mentioned receiving interesting information about chemicals and how to reduce their use indicating that the message had strong arguments. Adding this to the participants' positive thoughts on environmental protection, it is likely that the participants' attitude towards using chemicals in their everyday life has changed. This also corresponds to the 'persuasive system design model' (Oinas-Kukkonen & Harjumaa in 2009, cited in Coşkun & Erbuğ 2014, 216) according to which the intent could be to change participants environmental attitudes, the event is the 'Martat' application, and the strategy is the persuasive message on chemicals. Additionally, beyond the application, Marthas have strong communication platforms which means empowering persuasive messages are likely to reach many people.

All in all, the results from the questionnaire and the interviews show that majority of the participants demonstrated having pro-environmental attitudes. While these attitudes pre-existed the 'Martat' application use, many reported that the application provided them with useful advice for their individual needs and encouraged to keep acting environmentally friendly. What stood up from the results were how people had received interesting information regarding chemicals and how to avoid them as well as how the application was redeemed as a platform which did not put blame on the user. This means that the application's messages are more successful since empowering messages, rather than evoking guilt or blame, are more effective, according to Gifford & Sussman (2012, 71). Therefore, to answer the research question, the 'Martat' application *does* promote the accessibility of environmental attitudes for its users.

The overall time that it took me to proceed with this thesis surprised me but considering that I worked on it along with my other studies while considering other people's schedules, and wanting to do thorough work, I think I could not have worked any faster. Regarding the analysis process, I kept thinking about whether my content analysis was affected by my own views. As data should be analysed so that others could draw same conclusions from them, I kept thinking that I have made my own conclusions which others might not agree with. Therefore, I was self-conscious during the process and wondered on the validity of the findings.

Moreover, I learned to be more critical with acquiring information and acting on feedback as well as to trust myself more. There were incidents when I was uncertain with my data collection questions and proceeded to alter them based on feedback I got. However, only after receiving the data, I noticed that for some questions my original questions would have been more sufficient. In addition, during the analysis phase I realised how the answer options could have used clarification. For example, the scales from 1 to 5 had explanations only on the opposite ends of the scale leaving option 3 open for interpretation. I had intended that as 'somewhat', but it could also be seen as 'neither' or 'no opinion' which all give different meaning to the

answers. All in all, this showed me the vulnerabilities of a research and that I have some development needs if I wish to conduct another research in the future.

While working on this thesis regarding 'Martat' application, I learned how applications can be a source for good. I am usually careful with any application usage because I find that they can make one lose a lot of time on a daily basis. Therefore, because of my pre-existing attitude towards applications, I was determined to stay neutral in my research which, suffice to say, should be the basis of any research. Now that I have concluded my research and learned more about application usage, I feel more open towards them. I see that 'Martat' application works as a platform from which to seek important and useful information on how to act more sustainably in one's daily life. I find it that it is better when the information is categorised and anything unnecessary is left out. For example, some other applications have so much information with wide range of credibility that it is easy to get lost in them.

During this thesis process I also got to work together with a working life partner, the Martha organisation. Even though we only conversed via emails and an online meeting, I felt that it was a good learning experience for me, and I feel grateful for it. I learned more about time management and organisation skills as meetings and feedback, or any discussions proceeded in accordance with different people's timetables. It means that for one step to move forwards could take more time than I initially imagined. Moreover, I believe working together with other people broadens one's vision to consider also other aspects which might not have been seen otherwise. It also brought completely new knowledge to my reach as I was new to the theory regarding environmental attitudes.

Eco-social work with environmental attitudes and ecosocial transition are very relevant themes in today's society, in my opinion. As we cannot go forward in the same way as before, social care field must rise up to challenge and change that. I believe that the field has potential to make it happen as we are closely working with people and know the ability of them. For example, not all can be encouraged to buy local and organic products as with a lower income it is not sustainable to do, then different affordable ways can be found. If a person is not able to take care of themselves let alone the environment, their health could be restored with nature-based activities which could then strengthen their connection to nature and desire to protect it. All in all, I believe eco-social work will be a part of all social work in one way or another.

Further research ideas, surrounding the topics of the thesis, could be to study how the age groups, which were under-represented in the application users, found the application and that way find out how to make the application more known to their age group as well. Overall, more research could also be done on the concrete ways how eco-social work can be conducted. During my theory phase, I mostly came across abstract ideas that everyone should protect the

environment, but no concrete tools were provided. For example, developing a guidebook for social care professionals in different sectors could be proved useful in integrating eco-social work practice in different workplaces.

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Appendix 1: Original Finnish version of the questionnaire

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Opinnäytetyö - Martat-sovelluksen käyttäjien ympäristöasenteet

Opinnäytetyö - Martat-sovelluksen käyttäjien ympäristöasenteet

Hei,

Olen Mari Pöllänen, sosionomiopiskelija Laurean ammattikorkeakoulusta. Teen opinnäytetyötä Marttaliitolle liittyen Martat-sovellukseen ja siihen, edistääkö sovellus myönteisiä ympäristöasenteita- ja tekoja.

Kyselyn tietoja kerätään vain opinnäytetyön tutkimusta varten, eikä niitä verrata tai käytetä muuhun Martat-sovelluksen keräämiin tietoihin. Tietojen keruu ei vaikuta sovelluksen käyttökokemukseen.

Tämän kyselyn lisäksi olen kiinnostunut haastattelemaan viittä (5) ihmistä kyseisen asian puitteissa. Jos olet kiinnostunut vastaamaan kysymyksiin syvällisemmin, jätäthän yhteystietosi kyselyn lopussa ja olen sinuun yhteyksissä varatakseni ajan haastattelulle.

Osallistumalla kyselyyn annat suostumuksesi siihen, että kyselyn tietoja käytetään opinnäytetyön tutkimuksessa.

Kysely on 3-osainen ja sen täyttämiseen menee noin 5-10 minuuttia.

Kiitos paljon kaikille tutkimukseen osallistujille!

*Pakollinen

1. Minkä ikäinen olet? *

Merkitse vain yksi soikio.

- Alle 18
- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80 tai vanhempi

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2. Kuinka huolestunut mielestäsi olet ympäristön tilan muutoksesta ja ilmastonmuutoksesta? (esim. luonnon monimuotoisuuden katoamisesta, luonnonvarojen ylikulutuksesta, yms.) *

Merkitse vain yksi soikio.

En ollenkaan

1

2

3

4

5

Erittäin huolestunut

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3. Kuinka avoin mielestäsi olet uusille kokemuksille? (esim. lähdetkö mielelläsi tutustumaan erilaisiin tempauksiin, lähdetkö mielelläsi kokeilemaan uutta harrastusta, kokeiletko mielelläsi uusia reseptejä, yms.) *

Merkitse vain yksi soikio.

En ollenkaan

1

2

3

4

5

Erittäin avoin

4. Uskotko, että voit omilla teoillasi vaikuttaa ympäristön suojelemiseen? *

Merkitse vain yksi soikio.

En usko

1

2

3

4

5

Uskon vahvasti

5. Mitä harrastat luonnossa? *

Luonnolla tarkoitetaan tässä niin metsää, puistoa kuin omaa pihaakin.

Valitse kaikki sopivat vaihtoehdot.

- Käyn metsästävässä.
- Käyn sienestävässä ja/tai marjastamassa.
- Harrastan luontovalokuvausta.
- Taiteilen luonnossa.
- Pyöräilen/kävelen luonnossa.
- Harrastan maastoajelua (moottoriajoneuvolla).
- Muu: _____

6. Seuraatko uutisia? *

Merkitse vain yksi soikio.

- Päivittäin.
- Kerran viikossa.
- Harvemmin.
- Muu: _____

7. Katsotko TV:tä tai muita suoratoistopalveluita (Netflix, HBO, YouTube, etc.)? *

Valitse kaikki sopivat vaihtoehdot.

- Katson luontodokumentteja.
- Katson uutisia.
- Katson sarjoja ja elokuvia.
- Katson tiedeohjelmia.
- Muu: _____

Martat-sovellukseen liittyvät kysymykset:

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8. Onko ympäristöystävällisyyteen liittyvä tieto mielestäsi helposti saatavilla Martat-sovelluksessa? *

Merkitse vain yksi soikio.

Ei ole helposti saatavilla

1

2

3

4

5

On erittäin helposti saatavilla

9. Miten Martat-sovellus on auttanut sinua käyttäytymään ympäristöystävällisemmin? *

10. Miten Martat-sovellus on muuttanut näkemystäsi ympäristöön? *

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11. Onko Martat-sovellus lisännyt tietämystäsi ympäristön suojelusta? *

Merkitse vain yksi soikio.

Ei ollenkaan

1 2 3 4 5

Paljon

12. Martat-sovellus antaa tilaisuuden yksilölliseen oppimiseen *

Merkitse vain yksi soikio.

Ei ollenkaan

1 2 3 4 5

Erittäin hyvin

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Opinnäytetyö - Martat-sovelluksen käyttäjien ympäristöasenteet

13. Martat-sovellus on mukaansatempaava *

Merkitse vain yksi soikio.

Ei ollenkaan

1 2 3 4 5

Erittäin mukaansatempaava

14. Liittyn kahteen edelliseen väittämään:

Miten Martat-sovellus antaa tilaisuuden yksilölliseen ja mukaansatempaavaan alustaan oppia ja osallistua?

15. Oletko käyttänyt Martat-sovelluksen keskustelupalstoja? Mitä mieltä olet niistä? *

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Opinnäytetyö - Martat-sovelluksen käyttäjien ympäristöasenteet

16. Luotatko Martat-sovelluksen sisältöön? *

Merkitse vain yksi soikio.

- Luotan kaikkeen.
- Luotan vain Marttojen lisäämään sisältöön.
- Olen epävarma sovelluksen sisällöistä.
- Muu: _____

17. Onko Martat-sovellus mielestäsi miellyttävän näköinen? *

Merkitse vain yksi soikio.

Ei ollenkaan

1 2 3 4 5

Erittäin miellyttävä

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Opinnäytelyö - Martat-sovelluksen käyttäjien ympäristöarvio

18. Onko Martat-sovellus helppokäyttöinen? *

Merkitse vain yksi soikio.

Ei ollenkaan

1 2 3 4 5

Erittäin helppokäyttöinen

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Opinnäytelyö - Martat-sovelluksen käyttäjien ympäristöasenteet

19. Kuinka hyvin Martat-sovelluksesta löytyy itsellesi hyödyllisiä ohjeita ja neuvoja? *

Merkitse vain yksi soikio.

Ei löydy mitään hyödyllistä

1

2

3

4

5

Löytyy erittäin hyvin

20. Kuinka usein käytät Martat-sovellusta? *

Merkitse vain yksi soikio.

Päivittäin.

Kerran viikossa.

Kerran kuukaudessa.

Harvemmin.

Muu: _____

Ympäristöasenteisiin liittyvät kysymykset:

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Opinnäytetyö - Martat-sovelluksen käyttäjien ympäristöasenteet

21. Mitä ajattelet, kun ajattelet sanaa ympäristö? *

22. Miten tunnet, kun ajattelet sanaa ympäristö? *

23. Näiden ajatusten ja tuntemusten pohjalta, minkälaisia ympäristöystävällisiä valintoja ja arjen tekoja teet? *

24. Mitä muita keinoja ympäristön suojelemiseksi keksit tällä hetkellä? *

25. Yhteystietosi haastattelua varten:

Appendix 2: Interview questions in Finnish

- Kuinka otat yhteyttä luontoon?
Tuoko sovellus uutta näkemystä luontoyhteyden parantamiseen?
- Kuinka usein teet ympäristöystävällisiä tekoja?
Edistääkö sovelluksen Muistutus-ominaisuus sinua toimimaan ympäristöystävällisemmin? Kuinka?
- Mitä ympäristön suojele sinulle merkitsee?
Onko käsityksesi ympäristön suojelemisesta muuttunut sovellusta käyttäessäsi?
- Mikä ajaa sinua käyttäytymään ympäristöystävällisemmin jokapäiväisessä elämässäsi?
Auttaako sovellus sinua tässä asiassa?