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Communication around Implementation of SCHOOL GARDENS in Tårnby

Design Thinking // Situational Mapping // Communication

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TITLE PAGE

Title:

Communication around Implementation of SCHOOL GARDENS in Tårnby –

Design Thinking // Situational Mapping // Communication

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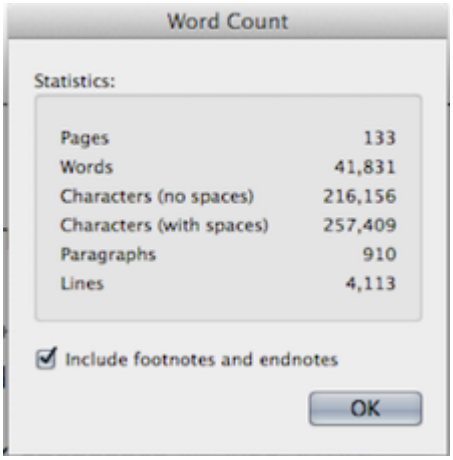

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ABSTRACT

The societal changes of our food system and worldwide changes in household roles contribute to environmental challenges, and a decline in the level of skills linked to food production, preservation, preparation and serving in society. There is evidence that the resulting obesogenic society creates a setting where children are more susceptible to overweight, obesity and related non-communicable diseases. These are worldwide tendencies existing in Denmark as well

There is growing evidence that school gardens can have a positive influence on children's health behaviour and their awareness of the effects of human behaviour on the environment. Furthermore, educating children to become more food literate and environmentally aware can help to create consumers who can make qualified decisions regarding the food system. School gardens are seen as having an important role in this education.

Whereas several studies have researched the positive outcomes of working with school gardens, less has been about how to actually get teachers and school managers to initiate implementation of school gardens in the first place. None of the studies found focus on the role of communication in relation to implementation.

This Extended Master Thesis researches challenges and opportunities in relation to working with school gardens in a Local Council school district in Denmark. These issues are explored through a combination of Design Thinking, Situational Analysis & Mapping and Working Group. Furthermore, the knowledge gathered is used to suggest recommendations in relation to encouraging more schools to implement and work with school gardens in the Local Council school district.

Although this thesis has a focus on communication, a holistic approach was found to be important in order to deal with other issues that affect and disturb communication and take them into account in the communication planning. Some of the opportunities that can support teachers to a successful implementation are creating a strong network in the school district around the school gardens, involving school management, making a clear link to the curriculum and related policies that the Local Council have. More creative and alternative ways of communicating to reach the teachers and managers are required rather than using standard communication channels and mediums. The upcoming school reform was also seen as a central element in which school garden work can closely be linked to.

The Theoretical Framework of Design Thinking, Situational Analysis & Mapping and Communication Planning has contributed to creating an analysis based on user-needs and the findings and recommendations came from the research participants themselves. Furthermore, creating a Persona, Storyboard and Customer Journey Map were central to the visualisation of the relations between the findings whilst taking into account the context in which the empirical data was collected.

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TABLE OF CONTENTS

ABSTRACT **1**

ACKNOWLEDGMENTS **2**

1. INTRODUCTION **6**

1.1. CONTEXT OF PROBLEM 6
1.2. STATE OF THE ART 9
1.3. CONTRIBUTION OF NEW KNOWLEDGE 14
1.4. STRUCTURE OF THIS THESIS 15
1.5. READING GUIDE 16

2. INTRODUCING THE CASE AND PROBLEM FORMULATION **18**

2.1. PRACTICAL VISITS 18
2.2. SCHOOL GARDENS IN TÅRNBY 19
2.3. DEMOGRAPHICS OF TÅRNBY 20
2.4. PROBLEM AREA 21
2.5. PROBLEM FORMULATION 23
2.6. AIM 24
2.7. DELIMITATION 24
2.8. DEFINITION OF KEY TERMS 24

3. METHODOLOGY AND PHILOSOPHY OF SCIENCE **26**

3.1. DESIGN THINKING APPROACH 30
3.2. ETHNOGRAPHY AND DESIGN ETHNOGRAPHY 36

4. WHAT METHODS WERE USED TO COLLECT EMPIRICAL DATA? **38**

4.1. SEMI-STRUCTURED INTERVIEWS 38
4.2. OBSERVATIONS 43
4.3. MAPPING SPACES & TOUCHSTONE TOURS 45
4.4. ETHICAL CONSIDERATIONS 47

5. THEORETICAL FRAMEWORK **49**

5.1. COMMUNICATION 50
5.2. SITUATIONAL ANALYSIS & MAPPING 63
5.3. CUSTOMER JOURNEY MAPPING 66
5.4. PERSONA 69
5.5. STORYBOARD 72

6. EXTRACTING THE DATA, ANALYSIS AND RESULTS **74**

6.1. SITUATIONAL ANALYSIS 74
6.2. PERSONA 77
6.3. STORYBOARD 82
6.4. CUSTOMER JOURNEY MAPPING 87

6.5. WHAT DOES IT TELL US? 89
7. RECOMMENDATIONS TO THE WORKING GROUP 114
8. DISCUSSION & FUTURE PERSPECTIVES 117
9. CONCLUSION 124
10. REFERENCES 125
11. APPENDICES 130

LIST OF FIGURES & TABLES

FIGURE 1.1: DIFFERENT TYPES OF SCHOOL GARDENS 10
FIGURE 1.2: CONCEPTUAL MODEL OF POTENTIAL EFFECTS OF SCHOOL GARDEN PROGRAMS 12
FIGURE 2.1: MAP OF TÅRNBY 21
FIGURE 2.2: OVERVIEW OF PROBLEM AREA 23
FIGURE 3.1: METHODOLOGICAL FRAMEWORK, THE DESIGN CLOUD 27
FIGURE 3.2: WHAT IS DESIGN THINKING 30
FIGURE 3.3: BALANCE OF DESIGN THINKING 31
FIGURE 3.4: COMPLEX PERSPECTIVES OF DESIGN THINKING 33
FIGURE 3.5: THE ITERATIVE PROCESS OF DESIGN THINKING 34
FIGURE 3.6:THE THREE CONSTRAINTS OF DESIGN THINKING 35
FIGURE 4.1: EXAMPLE OF AN INTERVIEW GUIDE 40
FIGURE 5.1: THEORETICAL FRAMEWORK 49
FIGURE 5.2: DIFFERENCE BETWEEN RECEIVER GROUPS AND TARGET POPULATION 57
FIGURE 5.3: RELATIONASHIP BETWEEN SENDER-COMMUNICATION PLANNER-RECEIVER 59
FIGURE 5.4: EXAMPLES OF PERSONAS 71
FIGURE 5.5: EXAMPLE OF A STORYBOARD 73
FIGURE 6.1: COLOUR THEMES 75
FIGURE 6.2: SITUATIONAL ANALYSES & MAPPING –MAKING MESSY & ORDERED MAPS 75
FIGURE 6.3: FINDING PATTERNS OF LIKENESS & CONTRADICTIONS 76
FIGURE 6.4: CREATING A PERSONA 79
FIGURE 6.5: PERSONA –SOLVEJ STØVRING 81
FIGURE 6.6: CREATING A STORYBOARD 82
FIGURE 6.7: SOLVEJS SCHOOL DAY 84
FIGURE 6.8: CREATING A CUSTOMER JOURNEY MAP 87

TABLE 4.1: OVERVIEW OF RESEARCH PARTICIPANTS 38
TABLE 5.1: WHO DEFINES THE COMMUNICATION PROBLEM, GOAL AND SOLUTION? 61
TABLE 5.2: ROLES OF COMMUNICATION AND THEIR FUNCTIONS 62

1. INTRODUCTION

In this chapter the background and context for the thesis will be outlined. The State of the Art is presented and our contribution to new knowledge will be outlined. An introduction to the structure of the thesis and a reading guide will also be included.

The focus of this Extended Master Thesis will be to research how information has been communicated and received in Tårnby Council school district in order to encourage implementation and continuity of school gardens in the local schools. Challenges and opportunities to implementation of school gardens will also be explored. These issues will be explored through a combination of Design Thinking, Situational Analysis & Mapping and Communication Planning.

1.1. CONTEXT OF PROBLEM

Our food systems are being influenced by societal changes. This results in increased pressures on our food system, due to our longer lifespan and the increasing world population, thus creating greater demands for food produce and land to produce food on. The rise in urbanisation and globalisation of the food system leads to produce being transported vast distances. Food companies are becoming larger and smaller companies being pushed out of the market, leading to more uniform food products, less diversity and a higher concentration of food power. All of the above also results in loss of biodiversity and environmental consequences (Tansey and Worsley 1995, p.3-4; Godfray et al. 2010).

Simultaneously, worldwide changes in roles within the household and lack of time has also led to increased demands for convenience food and labour saving devices. Resulting in a decline in the level of skills linked to food production, preservation, preparation and serving in society (Tansey and Worsley 1995, p.3-4). This tendency can also be seen in Denmark as today, only 4% of children in Denmark help cook in the home, as opposed to 58% of the previous generation. The main reason given for not including children in cooking at home today was that parents thought it was too complicated and troublesome (Madkulturen 2013).

Hence, there is growing evidence that school gardens can have a positive influence on

children's health, dietary habits, physical activity levels, wellbeing, social cohesion and their awareness of the effects of human behaviour on the environment (Maller 2009; Wistoft 2013; Ozer 2007). Furthermore, educating children to become more food literate and environmentally aware can help to create consumers who can make qualified decisions when shopping for food products, eating and cooking them (Andersen 2000; Dyg 2014a; Morgan and Sonnino 2008). School gardens are seen as having an important role in this education.

The positive effect of school gardens are relevant today as there is evidence that the changing food system is affecting our health. The obesogenic society we live in today creates a setting where children are more susceptible to overweight, obesity and related non-communicable diseases. These are worldwide tendencies existing in Denmark as well (Sundhedsstyrelsen 2009; The Danish Health and Medicines Authority 2010). It is well known that these tendencies are closely linked to socio economic status (SES) and that low SES leads to increased risk of overweight thereby increasing social inequality (Butland et al. 2007). The setting of school gardens has been chosen as an interesting area to study these problems because it includes children from all backgrounds in the teaching and thus increases the likelihood of reaching children from all social backgrounds. The school can also be seen as a health promoting setting, in that almost all children in Denmark attend school and therefore a broad population can be reached (Bell and Dyment 2008; Morgan and Sonnino 2008).

Politically there is an increasing interest in school gardens in Denmark. The Danish Ministry of Education and the Danish Ministry of Food, Agriculture and Fisheries has each provided 1 million DKK to the development and spreading of school gardens and related teaching in the whole of Denmark; their goal is to have more municipalities and schools working with school gardens (Dyg 2014b; Ministry of Food, Agriculture and FIsheries of Denmark 2013).

The Team for growth in the food sector realises the positive effect of school gardens on children in their report from 2013, one of the recommendations is as follows:

> *"...public schools should consider how school food, school gardens and knowledge of food products can be integrated into the school day to increase pupils health and wellbeing, knowledge and interest for food …"* (Ministry of Food, Agriculture and

Fisheries of Denmark 2013).

School Reform

A new school reform will be implemented in Denmark when the new school year begins in August 2014. The intentions are that the new school reform increases the educational level, creates a better learning environment, greater variety in teaching methods, more flexibility for the individual Local Council, increased social skills, motivation, physical activity and generally a greater well-being for the pupils (The Danish Ministry of Education 2012; The Danish Ministry of Education 2013). Many children do not learn enough during their school time, which positions them inadequately to deal with the challenges in today's society, labour market and globally. Especially children of parents with short educations do less well. Not only the educational level has to be improved, also the children's personal and social competencies should be developed in order to educate them to become engaged citizens in a living democracy (The Danish Ministry of Education 2012, p.7-8).

The school reform will offer longer school days with greater variety and will consist of more time set aside for teaching subjects and new supporting activities. Some aims of the new activities is to support the teaching, and provide possibilities for practical project courses with subject related themes, play, movement and help with homework. Thereby increasing motivation for learning, facilitating the pupil's social and personal development, their ability to cooperate and collaborate thereby strengthening inclusion and providing social competencies to be used later in life (The Danish Ministry of Education 2012, p.12-14; The Danish Ministry of Education 2013, p.3). It is up to the individual schools to decide how to spend the activity hours, and they are allowed to use them across classes and years (The Danish Ministry of Education 2012, p.25).

The new school reform also encourages more professional cooperation from within and outside the school in order to include a wider variety of people with specific skills (The Danish Ministry of Education 2012, p.7, 12, 13, 39; The Danish Ministry of Education 2013, p.22). It is also a requirement that the schools ensure that the pupils are physically active every day, which will affect the health, and physical development of the pupils positively, and will contribute to a better learning environment (The Danish Ministry of Education 2012, p.13, 19, 23-25; The Danish Ministry of Education 2013, p.3).

Although there is a political interest in school gardens and as presented above finances

have been provided for the development of them, they are not mentioned directly as an example of a supporting activity in the school reform. Activities suggested by The Ministry of Education that relate to school gardens are building a greenhouse, and teaching outdoors where ingredients collected in the nature can be cooked in home economics classes (The Danish Ministry of Education 2013, p.23, 35). Professional opinion within a varied range of professions show, there is agreement that school gardens and farm visits can contribute to the goals of the school reform through practical, experimenting and more interesting teaching (Dyg 2014b).

Part of the motivation for this research is that the link can be seen between a school garden and several other intentions and requirements for the supporting activities mentioned in the school reform. For example, in relation to 45 minutes/day of physical activity, as a new teaching method, involving the local community, innovation, entrepreneurship, parental participation, focus on inclusion, and a better learning environment with less disturbance and noise. Therefore, research into the area of school gardens can help add to the growing evidence base of the area of school gardens.

1.2. STATE OF THE ART

In order to find potential gaps in the research base of school gardens, a literature search has been carried out. School gardens are not a new phenomenon in Denmark, and in recent years there has been an increased interest in doing research within the school garden area (Dyg 2014b). The motivations for this thesis described in the previous section have presented many areas in which school gardens can add to the teaching environment in Denmark, yet they are not placed highly on the political agenda. The following overview shows some of the main types of school gardens and areas of research interest at the moment. Literature included in the State of the Art is a combination of scientific research and grey literature both from within Denmark as well as from an international perspective.

What are different types of school gardens?

From the literature it could be seen that schools use gardens in different ways in their teaching. Lots of the international literature showed concepts that were on school whereas in Denmark the more well-known and defined examples of school gardens tend to be farm visits and off-site gardens, where the school classes come to them.

School garden work can be everything from growing plants in small pots in a windowsill to the large-scale community gardens. This is illustrated in figure 1.1. All the models in the figure have some things in common, such as; sensorial aspects of working in the earth, and tasting produce. Some concepts can also overlap; for example an out of school garden can also be a community-based garden. Some of the basic differences in the models are that out of school gardens like farms tend to involve time for travelling from the school to the farm, which in some cases can be a drawback in the current school system in Denmark. On-school gardens are easier to incorporate into the curriculum on a daily basis. One of the benefits of out of school gardens is that they represent real authentic settings and involve professionals that are specialised and have an education in the area (Center for Ecoliteracy 2007; Blair 2009; Dyg 2014a; Ozer 2007; Ratcliffe et al. 2011; Sly and Eichorn 2014).

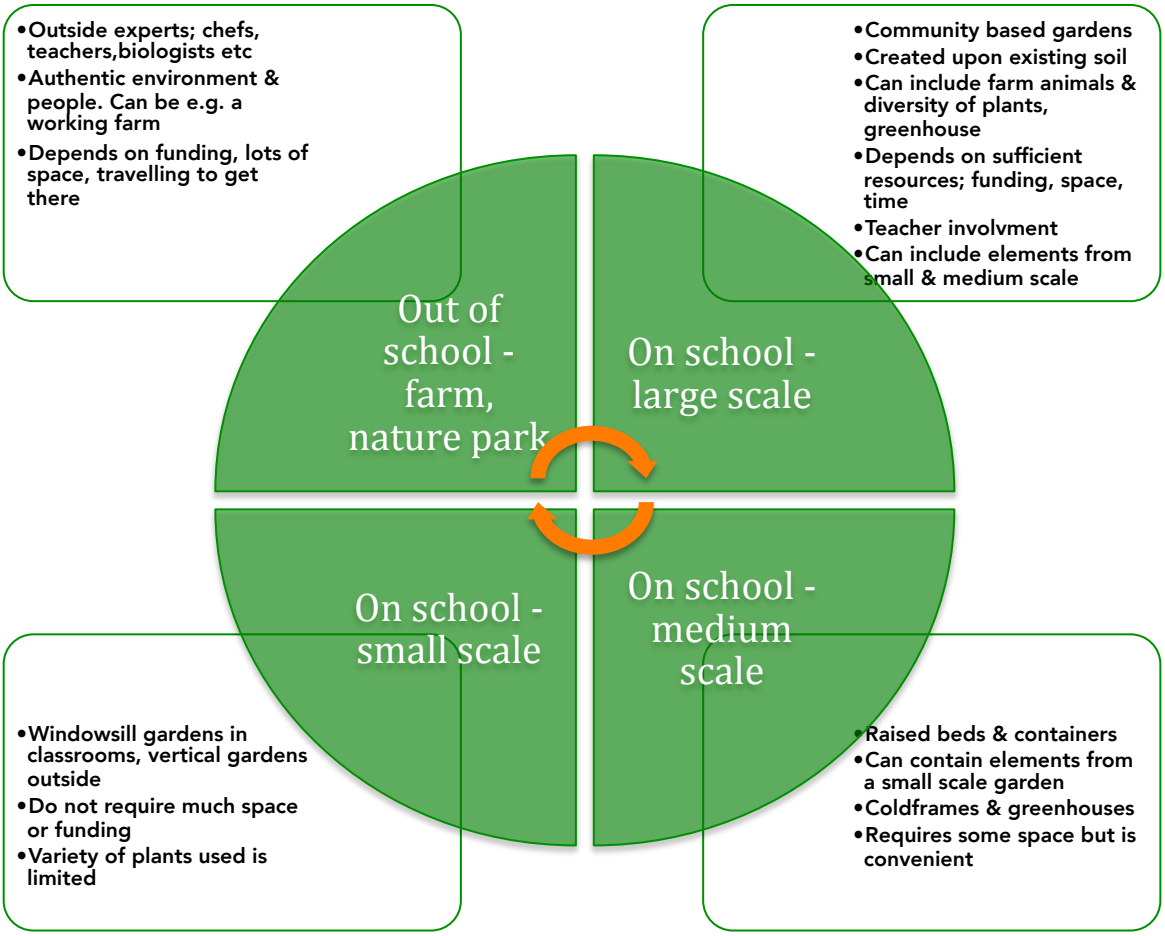


Figure 1.1: Different types of School Gardens (Center for Ecoliteracy 2007; Blair 2009; Dyg 2014a; Ozer

2007; Ratcliffe et al. 2011; Sly and Eichorn 2014).

Why are school gardens relevant?

The literature search has shown that school gardens can have many positive impacts on children, including:

- Increasing knowledge about where fruit and vegetables come from and how to prepare them, thereby increasing food literacy and food courage
- Encouraging children to be more physically active during their school day
- Increasing social and academic competencies
- Creating a closer relationship to nature and increasing awareness on the effects of human behaviour on the environment

These points will now be elaborated on in the following section:

Food literacy and food courage:

Peer reviewed studies were found that document the effects of school gardens on children's increased fruit and vegetable intake. Some of these studies showed that children working in garden based education schemes showed significantly improved nutritional knowledge, increased the number of different vegetables they identified and their preference for vegetables compared to control groups (Parmer et al. 2009; Ratcliffe et al. 2011). A program evaluation of the Danish on-farm school garden project Haver til Maver also showed the same tendencies (Wistoft et al. 2011).

Increased physical activity:

Another benefit from working in the school garden is that levels of physical activity rise and this is closely linked to a higher ability to concentrate. A comparative study in Denmark showed that level of physical activity rose while in an outdoor education situation and it recommended a combination of classroom learning and outdoor learning spaces (Mygind 2007).

Social and academic competencies:

Qualitative exploratory research has shown positive benefits to mental, emotional and social health through hands on activities in nature. Some of the benefits seen were

increased self-confidence, engagement with the school, stress relief, connectedness to others and that it caters to different learning styles (Maller 2009; Mygind 2009). An international review shows that school gardening can improve the pupil's academic and personal skills and makes it easier for them to couple theory and practice together and creates a more positive attitude towards attending school. It also pointed to several studies that have shown a strengthened sense of community amongst pupils (Blair 2009).

- Closer relationship to nature:

Literature also showed a connection between working in some school gardens and strengthening the pupils' relations to nature in order to learn about the relations between food production and the impacts on the environment, and creating values so pupils become protectors of nature rather than vandalising it (Johnson 2012; Ozer 2007).

Ozer (2007) created a conceptual model of potential effects of school garden programs, which includes the points presented above, furthermore the figure also shows the positive effects on the whole family and the larger school community. The model can be seen in figure 1.2, below:

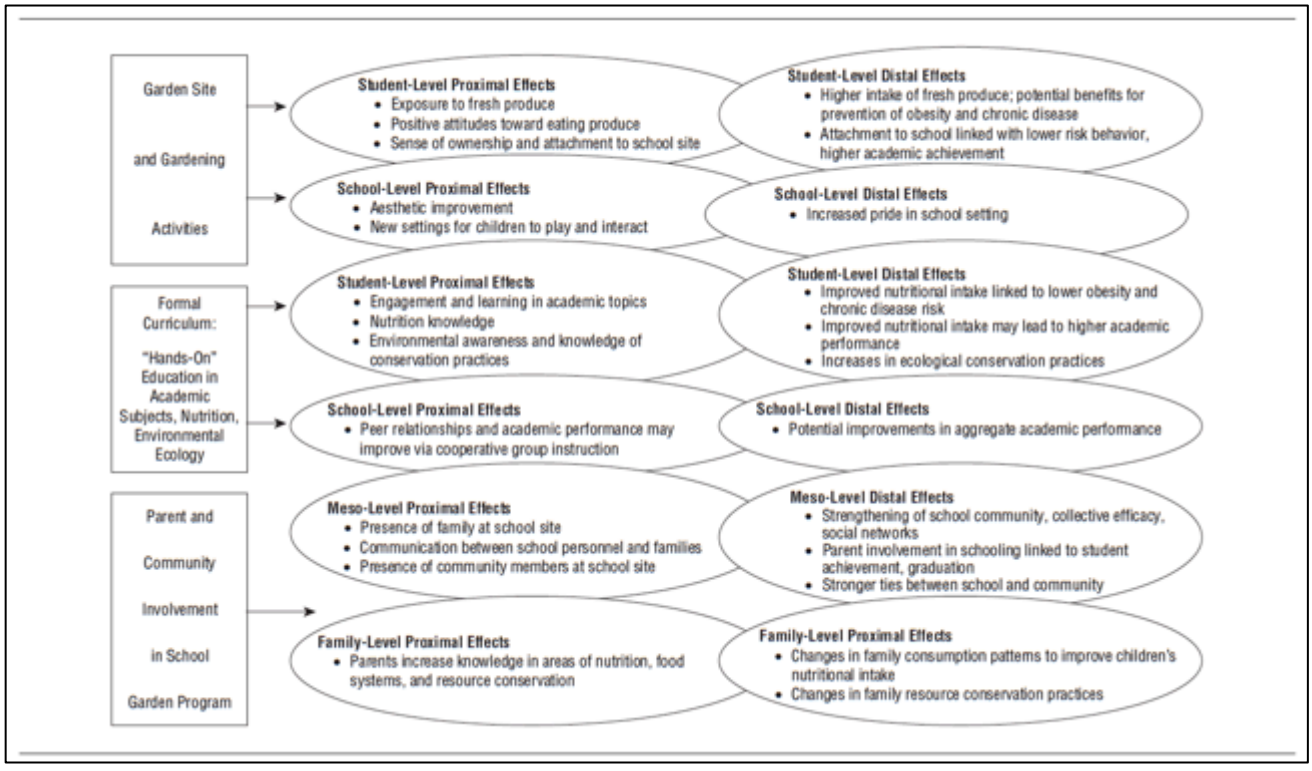


Figure 1.2: Conceptual model of potentia leffects of school garden programs (Ozer 2007)

What are the challenges to implementation of school gardens?

According to a few research reviews some of the main challenges to successful implementation of school gardens are that limited resources are available, such as, funding, personnel and time. A lack of support from other actors such as management, parents and volunteers, lack of gardening experience on the teachers' behalf and lack of space on the school grounds to construct the garden (Blair 2009; Ozer 2007). An American qualitative research paper also points to barriers in implementation and sustaining a school garden as lack of: time, funds, co-operation with the management, long-term volunteers and a full time garden coordinator (Hazzard et al. 2011).

Some of the other factors found are challenges in maintaining the garden in the holidays, ineffective integration into the curriculum, vandalism of the garden, and that the program is not valued as a teaching tool (Blair 2009; Hazzard et al. 2011; Ozer 2007).

A Danish study of outdoor education situations recommended that actors should collaborate more to improve the impact and availability of outdoor education facilities. Also that outdoor education and classroom teaching should be combined in order that they can be linked closely to the Danish school systems goals and cross-disciplinary perspectives. The importance of further study into the grassroots movement was also stressed (Bentsen, Mygind, and Randrup 2009).

Many of the above factors have been supported in further research and grey literature. In the Center for Ecoliteracy's publication on Getting Started – a guide to creating school gardens as outdoor classrooms, the importance of the support of the school head teachers is shown to be paramount to the successful implementation of the garden. In their booklet, they also help implementers to overcome barriers such as thinking they do not have enough space for the garden and lack of experience does not have to be an issue either. Involving the local community is also central to successful implementation (Sly and Eichorn 2014). Another getting started booklet, stresses the problems faced in the summer holidays and the importance of returning after summer to a bountiful garden (Center for Ecoliteracy 2007).

It is important to incorporate the learning goals from the curriculum into the school

garden concept in order for it to be accepted (Johnson 2012). An international review points to certain challenges the teachers have in implementation of gardens such as, lack of personal interest, capabilities, knowledge and time. Some of the opportunities described that can encourage teachers are support from the school management, positive role models and experiencing pupils in a fun learning environment. Providing education for the teachers working in the garden is another important aspect mentioned (Blair 2009).

The above State of the Art is a mixture of both qualitative and quantitative research that was also reflected in the literature reviews that were found. The quantitative research used methods such as food frequency questionnaires that were analysed through applying statistics and generally have a focus on the outcome of the school gardens on the pupils. The qualitative studies use methods of interviews and observations and were analysed mainly through coding, comparative analyses and content analyses. Their main focus was the study of outcomes of school gardens on the children.

Few studies were found that focus specifically on implementation of school gardens and the ones found were mainly from an international perspective. Some research recommends further studies into overcoming barriers to implementation and ensuring continuity of the garden by the teachers (Blair 2009). But no studies dealing with implementation and communication have been found. Several studies and the grey literature dealt with topics such as, challenges and inspirations of how to get started, but less about how to overcome and how to communicate about these issues.

1.3. CONTRIBUTION OF NEW KNOWLEDGE

Due to the lack of studies found within the area of implementation of school gardens and the link to communication, this study will examine the role of communication in connection with implementation and continuity of a school garden in a Danish setting.

The Master in Integrated Food Studies realises that due to the complexity of many of today's challenges within the food system, these challenges have to be analysed and solved from a holistic point of view. Therefore, the master program offers an interdisciplinary approach to understand and develop public health, product design and food networks and policies. The master program consists of the combination of the three pillars within the disciplines of FINe, DESIGN and MENU:

- MENU: cover areas within Public Health Nutrition, defined as the three areas of The Healthy Meal, Food Service and Public Health Nutrition aspects of food.
- FINe: covers Food Innovation Networks, defined as the Socio-Technical understanding of food-environments and the policy processes related to the context of the food systems.
- DESIGN: covers Food & Design and relates to understanding and working with meals in relation to experiences, aesthetics and the context of the foodscapes.

The State of the Art did not reveal studies where interdisciplinary approaches were taken. Hence, this study will also contribute new knowledge into exploring if and how new combinations of theory and methods can shed new light on the area of school gardens in order to answer the problem formulation.

1.4. STRUCTURE OF THIS THESIS

The background, context of this thesis and a presentation of the State of the Art have been explained earlier in this chapter. In Chapter 2, the case of the school garden project in Tårnby Local Councils school district is introduced together with the problem formulation, reseach questions and aim.

In Chapter 3, the methodological framework of Design Thinking and Philosophy of Science will be presented and elaborated.

In Chapter 4, the methods used to collect the empirical data will be introduced and described in more detail and the procedures used in the research for the data collection methods of observations, semi-structured interviews and a mapping exercise in a school will be described. The ethical considerations for the research to take place will also be presented.

The Theoretical Framework used to understand and analyse the empirical data will be presented in Chapter 5. The integrated approach which the theories of Communication Planning, Situational Analysis & Mapping and the Design Thinking Concepts of Customer Journey Mapping, Personas and Stoyboards will be introduced.

Chapter 6 introduces the process of the data analysis and shows how the data collected was opened up through using Situational Analysis & Mapping in order to extract the

data that was used to develop the Persona, Storyboard and finally the Customer Journey Map. The findings are then presented, taking the Customer Journey Map as the starting point and keeping the gap in existing research in mind, elements from the other methods and tools will also be brought into the analysis. Key areas from the Theoretical Framework will also be drawn in to the analysis and linked to the findings.

In Chapter 7 recommendations for the Working Group in Tårnby's future work will be presented. The findings from the analysis will be brought into the discussion and future perspectives in Chapter 8. The use of the combination of theories and methods will also be discussed in this chapter and what they have brought to the research. The research will be concluded in Chapter 9.

1.5. READING GUIDE

The format below will be shown as meta-data at the start of a chapter that explains to the reader what the following chapter is about.

> **3. Methodology and Philosophy of Science**
>
> In this chapter, the methodological framework of Design Thinking for this thesis will be described in detail. This shows the researchers approach to the project. The difference between design ethnography and traditional ethnography will be explored. Lastly, the methods for the literature search are presented.

When the following combination of letters and numbers are referred to in the text, they represent participants of the interviews and observations carried out in the data collection:

- T1, T2, T3 are teachers interviewed
- M1, M2 are managers interviewed
- WG1 is a member of the working group interviewed
- WGM1, WGM2 are the working group meetings that were observed

The transcripts from all the interviews and observations of the Working Group meetings can be found on the attached USB stick.

When the following signs are used in the quotations from the interviews used in the

analysis in chapter 6 they represent:

- (...) That a part of the whole sentence from the transcription has been excluded in the quotation.
- ... Represents a pause in the speech

When referring to a touchpoint in the Customer Journey Map, it will be written like the following example: **Harvest Festival.**

The Customer Journey Map along with explanation of key symbols and abbreviations, Storyboard amd Persona are included in pullout versions at the back of the report, in order to be able to peruse them while reading relevant sections.

2. INTRODUCING THE CASE AND PROBLEM FORMULATION

A presentation of the field of study will now be made. This includes a description of how the case of Tårnby was found, the problem formulation, delimitation of the research, and definitions of key terms.

2.1. PRACTICAL VISITS

To gain knowledge of what is going on within the school garden area in Denmark and ensure the problem chosen for this thesis was of relevance to others than the researchers, practical visits to Haver til Maver[1] and Copenhagen's School Gardens[2] were arranged as well as Madkulturen[3] was contacted. Further, in November 2013 the researchers attended a workshop held by Madkulturen. The aim of the workshop was to kick-start knowledge sharing and dissemination about school gardens in Denmark. Madkulturen sees themselves as a junction box for all actors working with food and meals as a profession (see appendix A). This was also reflected through the variety of participants attending the workshop, who were a mix of professors, ministers, teachers, university students, and volunteer organisations.

During the workshop, many issues related to the school garden area were presented and discussed. Among these it was seen that implementation of school gardens is an interesting and relevant issue from a Danish perspective also in relation to the upcoming school reform (see appendix B).

Through the network established and by the participation of the researchers in various activities, contact was established to cases that were already working with school gardens, and also a low number of projects and cases that were about to initiate projects. For the sake of this thesis, the former were chosen. This choice was based on the relevance of being able to benefit from at least some degree of knowledge and experience with implementing and working with school gardens.

[1] An organic on-farm school garden project in Northern Zealand based on the three areas School Gardening, Outdoor Kitchen and Nature - http://havertilmaver.blogspot.dk/

[2] School garden project in suburban Copenhagen where schools and nurseries in the area can have their own garden - http://www.kbhskolehaver.dk/

[3] Madkulturen is an independent organisation under the Ministry of Food, Agriculture and Fisheries that works to ensure 'Better Food for All' - http://madkulturen.dk/

From this phase of familiarisation with the school garden area in Denmark, the researchers became aware that a small Working Group in Tårnby Local Council school district had initiated a Haver til Maver project and a pilot project in order to spread the concept in the area. Further, Tårnby is a council that faces several health challenges, and are therefore considered to be of relevance in order to benefit from the positive outcomes of school gardens identified in the State of the Art, which was presented in section 1.2. The school garden project coordinator was contacted and agreed to be part of the research project.

2.2. SCHOOL GARDENS IN TÅRNBY

In the school year 2011/2012 the Working Group within the Local Council school district, initiated a project regarding school gardens in order to devise a Tårnby-version of Haver til Maver Krogerup, taking into account the challenges and culture of the council area. The Working Group at that time was a broad constitution of teachers, managers, the councils Pedagogical Development Centre, Technical Department, The Child- and Culture as well as the Health Department. Other focus areas within the council related to teaching, children, motivation, health and inclusion were emphasised in the development of the concept. Goals for the project were set and an evaluation plan was made. The initial concept is characterised as being inspired by and initiated in cooperation with the original Haver til Maver. The plan was to establish an on-farm school garden that could function as a base somewhere in the Council area, where the children could come and work in the school garden surrounded by nature during a course of eight visits during the year. It was also planned to include outside professionals to do the teaching, for example a chef, farmer, and gardener.

In the school year 2012/2013 a pilot project involving two schools and one nursery was initiated. Each class and nursery group were assigned their own garden in the councils School Biological Garden. The Working Group followed the classes and nursery groups involved. During the pilot period it was soon realised that the teachers preferred a garden on the premises. Therefore the concept has now changed and is an individual concept for each school so the school can create their own school garden on the premises, closer to their school. Due to the more decentralised school projects, part of the strategy is to create a community feeling of being part of a local council project. In spreading the project, the Working Group wishes to take a bottom-up approach, as the

local council does not have a tradition for making decisions about projects throughout the entire school system. The Working Group also encourages more cooperation between schools, nurseries, after school clubs and any other interested parties.

With the school year 2013/2014 being the first school year after the end of the pilot period, the Haver til Maver project can still be considered quite new. Status at the moment is that the two schools involved in the pilot project continued working with Haver til Maver. At another school attempts to implement a school garden has been made without great success. Besides this, a number of projects are going on in nurseries.

At present the Working Group consists of three members, a pedagogical consultant representing the nurseries, a consultant within the science subjects, and a nature counsellor. They function as a support team to schools and institutions in the area wishing to start up a school garden and to those who have already initiated a garden project. Therefore it is important that schools in the area know what the workgroup can offer them, and that some of the challenges they imagine can actually be avoided or worked on by contacting the Working Group. Due to the above points the workgroup has two functions in terms of communication:

1. To make schools aware of what being part of Haver til Maver can do for them, in terms of education, health, physical activity, inclusion and the school reform.
2. To make sure that schools are aware of what the Working Group can do for them and how they can overcome challenges when setting up a school garden.

Figure 2.2 will be presented in section 2.4, with an overview of this situation in relation to the problem area.

2.3. DEMOGRAPHICS OF TÅRNBY

Tårnby Council is a Copenhagen suburban municipality situated in Amager. The council area has eight Public Schools, one of which is the council's special school (Tårnby Council 2014c). Tårnby can be seen in figure 2.1 below in relation to the rest of Amager.

Figure 2.1: Map of Tårnby

The research Centre for Prevention and Health's second health profile of the Capital Region of Denmark was published in 2011. The health profile presents data on the health, sickness and health behaviour of the citizens of the Capital Region of Denmark in 2010. One of the health political goals in the Capital Region is to promote health for everyone in the region and lower social inequality in health. A wide range of demographic and social factors affects the health and health behaviour of the population. The 29 Local Councils are classified in four social groups to reflect the social resources of the Councils, and picture the differences between the Councils. The categorisation is based on 3 factors: number of citizens with a short education, number of citizens outside the labour market and average gross income per citizen. Here Tårnby is rated as social group 3, the second lowest (Hammer-Helmich et al. 2010).

Tårnby is a council with a focus on nature and outdoor learning, not least for children. Tårnby also have a Health Plan 2020, A Strategy for Science and a Policy to strengthen inclusion in the schools (Tårnby Council 2014a; Wøhlk 2011; Tårnby Council 2014b)

2.4. PROBLEM AREA

From the literature presented in State of the Art, in section 1.2, it was learned that others have dealt with researching the positive outcomes and effects of school gardens on the pupils food literacy, liking of fruits and vegetables, academic learning, level of physical activity while gardening, environmental awareness and social wellbeing. The starting point for this thesis is therefore an acceptance of the existence of these positive outcomes of the school gardens on the pupils. Hence, instead of researching the positive aspects of the school garden, the focus will be on the actual implementation and how to encourage people to work with school gardens.

From the literature presented in State of the Art, and the insights gained from the school garden visits and attended workshop presented above in section 2.1 knowledge of various challenges related to school gardens as well as positive experiences and opportunities of school gardens were obtained.

At the first meeting with the Working Group coordinator in Tårnby, the researchers were introduced to the Local Councils Haver til Maver pilot project (as presented in 2.2), as well as a project description and a brochure that was used to inform people in the Local Council area about the present Haver til Maver in Tårnby. Today, two schools and a number of nurseries are working with school gardens, despite the fact that information of the local Haver til Maver project seems to have been communicated out in the council area. From this meeting it was sensed that part of the problem could originate from a lack of communication or communication not coming across to the intended receivers.

This inspired the researchers to investigate the communication that has taken place, how it has been received and how this might relate to the low level of participation in the Haver til Maver project. At the same time, another area of research chosen to be investigated were overall challenges and opportunities to implementation of school gardens, as it was considered relevant in order to gain knowledge about issues that could influence how the communication was received. The relevance of looking into the issue of communication was confirmed by the Working Group, who was very interested in receiving feedback of how their communication about the Haver til Maver project had been received in the council area.

In figure 2.2 (shown below), a visualisation that represents what has been seen in Tårnby as explained above, of a situation where actors who cannot see the point of the message can stop the flow of communication. These actors can quickly find challenges that they do not think can be overcome and the message then goes no further.

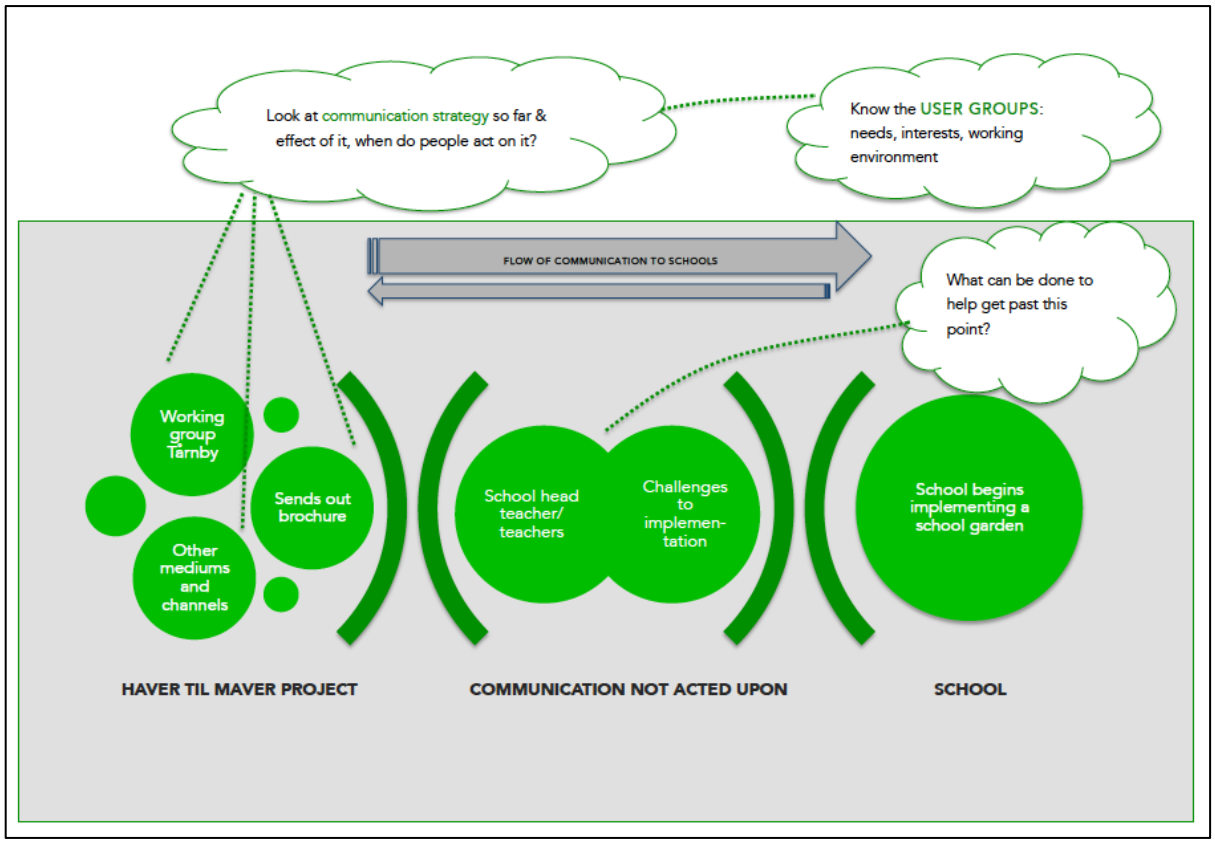


Figure 2.2: Overview of Problem Area

2.5. PROBLEM FORMULATION

Based on the introduction in Chapter 1 and the case of Tårnby presented above, the focus of this research has been narrowed down to the following problem formulation:

- How can a Design Thinking perspective be applied in order to generate new knowledge on implementation of Haver til Maver Tårnby in public schools in Tårnby Council school district?

RESEARCH QUESTIONS:

1. How can knowledge of challenges and opportunities to implementation of school gardens be used to make recommendations to the Working Group for spreading the concept of Haver til Maver in Tårnby?
2. How does the Working Group communicate their school garden strategy to public schools in the area?
3. Where and how do the teachers and school management receive communication and communicate with each other in the schools?

4. Who are the actors and actants and how do they support the schools in Tårnby in the implementation of school gardens?

2.6. AIM

The aim of this thesis is to investigate challenges and opportunities in relation to working with school gardens in Tårnby Council school district. As well as how information about Haver til Maver communicated from the Working Group is received at the schools. The knowledge gathered is used to sugget recommendations for the Working Group in relation to encouraging more schools to implement and work with school gardens. Furthermore, the aim is also to try out new combinations of methods and theory from several disciplines as represented in the three pillars of the Master program of Integrated Food Studies.

2.7. DELIMITATION

Within the area of school gardens, many issues and perspectives could be researched. As other literature has researched and found some positive and beneficial outcomes from working with school gardens on children's health, wellbeing and readiness to learn, the focus of this thesis will be on implementation and continuity of school gardens. The study will examine this from a teacher and management perspective, not including the perspective from children and parents. Furthermore the focus is narrowed down to include public schools only, not nurseries, after school clubs or volunteer associations and other organisations.

2.8. DEFINITION OF KEY TERMS

- School Garden: As was seen in State of the Art, there is no single definition of school gardens. In this thesis school gardens are seen as a space where the pupils can grow crops, that creates the possibility for linking it to the curriculum and thereby has a learning aspect; facilitates active participation and cooperation.

- Health: When referred to in this thesis the WHO definition is used stating: *"Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity"* (World Health Organisation 2003).

- Haver til Maver: An organic on-farm school garden concept originated on the farm called Krogerup, in North Zealand, Denmark. Professional chefs, gardeners, and

nature consultants carry out the teaching. Includes the three areas School Gardening, Outdoor Kitchen and Nature. Apply an inclusive and accepting pedagogical approach, based on experience learning (Haver til Maver 2014)

- Haver til Maver, Tårnby: An adapted version of the original Haver til Maver Krogerup. Instead of an on-farm concept it consists of decentralised on-school projects. It focuses on inclusion, food and nature.

- Communication: The exchange and sharing of information, attitudes, ideas or emotions. Earlier seen as a linear movement from a source to a receiver, whereas today it is stressed that communication is a concept that includes mutuality and shared perceptions. People participate in the communication process instead of 'sending' or 'receiving' information (Windahl, Signitzer, and Olson 2009).

- Information: This is the act of informing or being informed (Collins 1991). In the case of this thesis the content of the message being communicated.

3. METHODOLOGY AND PHILOSOPHY OF SCIENCE

In this chapter, the Methodological Framework of Design Thinking for this thesis will be described in detail. This shows the researchers approach to the project. The difference between design ethnography and traditional ethnography will be presented.

In order to answer the problem formulation and research questions presented in section 2.5, a combination of theoretical and empirical data is made use of, through combining Explorative, Design Thinking and Ethnographic perspectives. The empirical data collection consists of qualitative research. Former research, as presented in the State of the Art and existing knowledge within the problem area provides insight in the field and constitutes a base for the empirical data collection.

The Methodological Framework can be described by use of the 'Design Cloud' shown in figure 3.1. Investigating 'what is going on' by the use of ethnography, 'what is the concrete', 'what is the situation now'? In this case the data is collected via interviews, observations and mapping at one public school. In the analysis process a Persona, Storyboard and Customer Journey Map combined with Situational Analysis & Mapping and Communication Planning are applied to analyse the situation as it is, but also to abstract from this and start to picture how things could be. In this case suggestions and recommendations for the Working Group, based on findings from the empirical data collected.

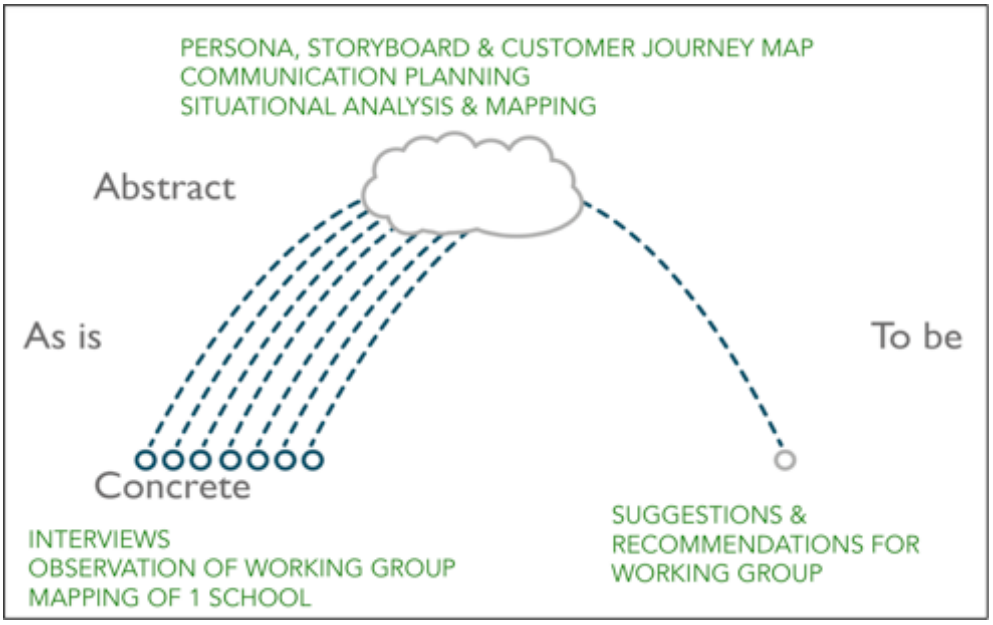


Figure 3.1: Methodological Framework, The Design Cloud (Bolvig 2013)

In order to answer the research question, which is based on a complex reality of social systems, and to create the Persona, Storyboard and Customer Journey Map and develop recommendations, the researchers were interested in interactions, meanings, emotions, and attitudes towards a specific field, not in quantification of for example, how many have heard about Haver til Maver, and where have they seen information. Hence a qualitative, user-centred, Design Thinking approach was adopted, which will be introduced in more detail in the rest of this chapter.

A focus on words and meanings is essential for a qualitative method, in which it is recognised that individuals can attribute meaning to events and to their environment. Hence human actions are meaningful; people act on the basis of the meaning they attribute to their acts and the acts of others (Bryman 2004, p.14, 279). The categories people employ to understand the world are social products, and their meaning is constructed in and through interaction (Bryman 2004, p.18).

The qualitative approach provides insight into what the subjects of investigation think, mean and experience, whereas a quantitative approach can provide numbers about how many share certain viewpoints (Kvale and Brinkmann 2009, p.115).

The pros of a qualitative approach is, that it can give an understanding of why people act the way they do, or why and how they make sense of the world around them; the underlying causes of phenomena can be explored. Difficulty in replication and generalisation is a disadvantage of a qualitative method; each research will be specific for the phenomena it investigates and within the context, in which it is carried out. Furthermore, as each researcher can interpret findings in different ways, this makes this approach susceptible for biased data collection and a lack of objectivity. Qualitative research is also often criticised for lacking reliability and transparency (Bryman 2004, p.284-86).

A quantitative approach would have provided different answers or kinds of data if applied. For example, a questionnaire is more likely only to provide answers to what you directly ask, thereby missing the possibility to ask deeper into an issue.

If time had allowed and timing had matched the gardening season, the semi-structured interviews could have been supplemented with observations of the interviewees' natural environment, which would provide more valid knowledge about their behaviour and what they actually do instead of what they say they do (Kvale and Brinkmann 2009, p.115).

The qualitative data collection is based on phenomenology and hermeneutics. Phenomenology is concerned with how individuals make sense of the world around them and the subjects experience in relation to a certain topic, most often decided by the researcher (Bryman 2004, p.13; Lindseth and Norberg 2004, p.146). This is central regarding the interviews, where the intention is to gain an understanding of the interviewees' worldview as they see it and understand the meaning of important themes of the interviewees lived everyday world, assuming that the important reality is what the person perceives it to be. This provides a fundament for understanding the individual in context, in order to understand their behaviour and values. The interviewer interprets the meaning of the central terms. It is acknowledge that how a certain phenomenon is experienced might differ from subject to subject (Bryman 2004, p.281; Kvale and Brinkmann 2009, p.26, 29).

Hermeneutics is applied throughout the process, where understanding and attainment of knowledge and experience go hand in hand. Interpretation and analysis of data is an

ongoing procedure according to the hermeneutic cycle. In order to revise, widen and deepen understanding new knowledge and experience is taken in (Lindseth and Norberg 2004, p.150-151). There is a constant movement between the whole and the parts that all together constitute the whole. It is a process where pre-existing theory, new data, experience and knowledge are interwoven to get new perspectives (Ezzy 2002, p.25-27). Hermeneutics deals with the interpretation of text where interpretation of meaning is central, specifying the kinds of meaning sought and attention to the question asked to the text (Kvale and Brinkmann 2009, p.50). Hermeneutics emphasise that human life and understanding is contextual, meaning that knowledge acquired in one situation is not obviously possible to transfer to other situations (Kvale and Brinkmann 2009, p.54).

Postmodernism questions the existence of universal systems of thought; the views of an objective reality that can be mirrored and mapped in scientific models. According to Postmodernism reality is a social construct where the focus is on interpretation and negotiation of the meanings of the social world (Kvale and Brinkmann 2009, p.52-54), contrary to the view that social phenomena and their meanings exist as external facts independent of social actors (Bryman 2004, p.16).

There is an increased focus on the local context, social and linguistic construction of social reality where knowledge in being validated through practice. Knowledge is not something that exists inside a person nor outside in the world, it exists in the relationship between persons and the world. The focus is not on the individual, but the interplay between people and the world. Knowledge is socially constructed; also in the interview situation and following analysis and interpretation, the knowledge is not just found or given but actively created in the process (Kvale and Brinkmann 2009, p.52-54). Stories and narratives are accepted as a means of making sense of social reality, human world of meanings and our own lives (Kvale and Brinkmann 2009, p.55). In postmodern thought there is a tendency for a pragmatic approach, which has changed the view of what is considered scientific and what research leads to true knowledge. Instead there is a focus on what produces useful knowledge (Kvale and Brinkmann 2009, p.52-56).

Social phenomena and categories are not only shaped via social interaction, they are constantly changing. Also when it comes to researchers it is realised that their accounts of the social world are constructions. This implies that researchers always represent a

specific version of social reality, which is one out of many ways of presenting social reality and not one that can be regarded as definite. Furthermore, the belief that researchers can uncover a pre-given external reality is questioned (Bryman 2004, p.17, 498). In postmodern thought knowledge of the social world is viewed as relative and many versions of it can be drawn out, there are no absolute truths (Bryman 2004, p.498, 500).

For the purpose of this thesis, the stance is also that people and the world affect each other. The aim of the study is not to make universal generalisations, but to develop recommendations to a Working Group in a specific council.

3.1. DESIGN THINKING APPROACH

No single common definition of design thinking exists to date, which is in the spirit of Design Thinking. One of the first definitions of design as a way of thinking comes from Herbert Simon (1969):

"Changing existing situations into preferred ones"

(Simon 1969, p.129)

Despite the fact that no single definition exists, there are global businesses that work with Design Thinking and recommend it as an innovative method, such as IDEO, Idea Couture, and Mckinsey. The following figure 3.2 lists some of the elements of Design Thinking (Mootee 2013, p.32).

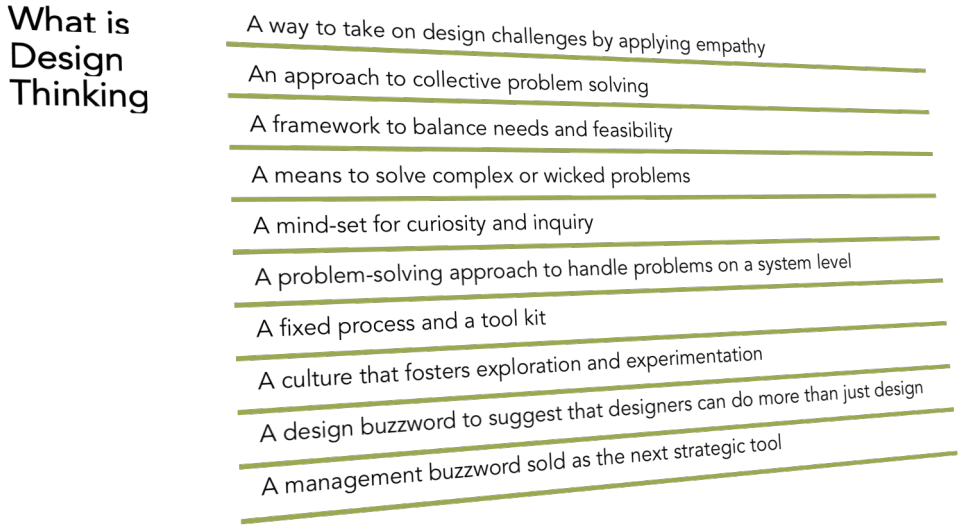


Figure 3.2: What is Design Thinking (Mootee 2013, p.32)

Today's society is changing faster than ever and in recent years large companies have turned to Design Thinking in order to keep up with these changes, make sense of the disruption and ensure continued competitiveness. Big business especially is a tradition that has been disrupted by the rapid speed of change. Technology, transportation, and communication are becoming faster and more efficient, these in turn change the old traditions around which cultures, economies and politics have been organised. Due to this technological development and the Internet, the world has become smaller; people talk, share, complain, form ideas and not least expect more. This has had a negative impact for many companies, as people just go somewhere else to find other services and products if they are not satisfied (Mootee 2013, p.3).

New management skills and approaches are needed to meet the challenges of today, as the old ones were developed to suit other needs; improve economic efficiency, assembly line work, maximising labour and productivity. Today we are facing a crisis of competition, economy, disruptive technology, job creation, social development, and sustainability, as well as a huge natural resource crisis. Solving these challenges with business as usual is not enough. Design Thinking is one suggestion of a different approach that fits these needs, a way that is smart, human, cultural, social, agile and innovative (Mootee 2013, p.4, 19).

Design Thinking is about balancing three main considerations: technical, commercial and human, (see figure 3.3 below) as opposed to the traditional techno-centric view of innovation that has achieved much in recent years but as Tim Brown argues it does not do enough for solving these global challenges of today especially within health, poverty and education (Brown 2009, p.2-3).

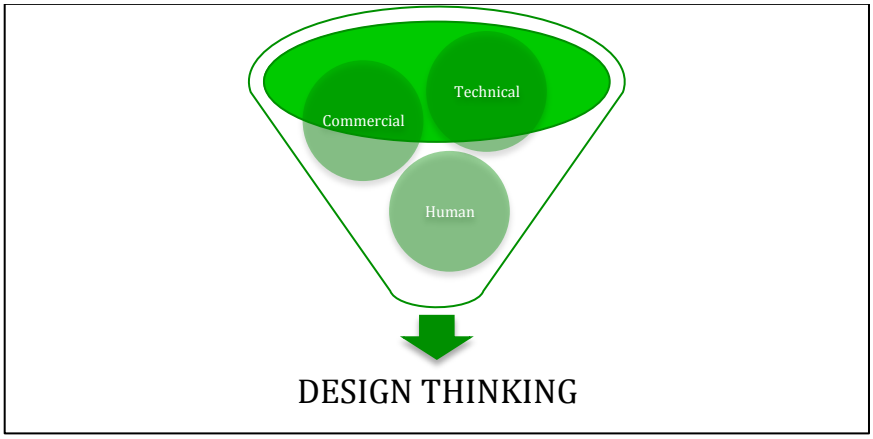


Figure 3.3: Balance of Design Thinking, inspired by Brown (Brown 2009, p.2-3)

A design thinking approach can link individual human needs with these pressing global challenges by offering a user-centric approach. It offers an innovative approach that can be accessed by many and can be integrated into business and daily life. The solutions offered will then have a greater impact, as the users will accept them and businesses will implement them. Up until now, designers have been able to integrate what is desirable from a human perspective, technologically feasible and economically viable to create products. Tim Brown states that this is not enough, in order to deal with the increasing complexity of the world, inter-disciplinary teams should be created and the concept of Design Thinking should be used by many different disciplines and types of people to solve many different types of problems (Brown 2009, p.5-7). Today, many organisations have a silo thinking mind-set, where people are separated from each other's knowledge, vocabularies that restrict real communication are created, collaboration is dampened, creativity is deemed crazy and management consultants spread status quo with their data, spreadsheet and PowerPoints. To solve the challenges of the future requires interdisciplinary thinkers who will think first and then work on solutions. A design thinker is a person who has both analytical and emotional skills. The design thinker's job is to solve complex problems by integrating ideas, information, mental models and methods from different disciplines. Professional qualifications needed in the future are among others the ability to respond to challenges that transcend specialised disciplines and understand problems that entail different, even competing perspectives (Design Thinking for Strategic Innovation, p. 198-99).

Many strategies within business build on predicting the future by looking at the past and the present, but face challenges of only being able to project three-six months ahead with acceptable accuracy. A reason for this is that the majority of business leaders have a dislike for chaos; linear minds set and are not aware of the effect from global ripples not directly related to the business world (Mootee 2013, p.13). Design Thinking can help make sense of the complex connections between people, places, objects, ideas and events (see figure 3.4 below). Furthermore, it sparks imagination; focuses on business decisions based on future opportunities rather than past event and reveals true value (Mootee 2013, p.14).

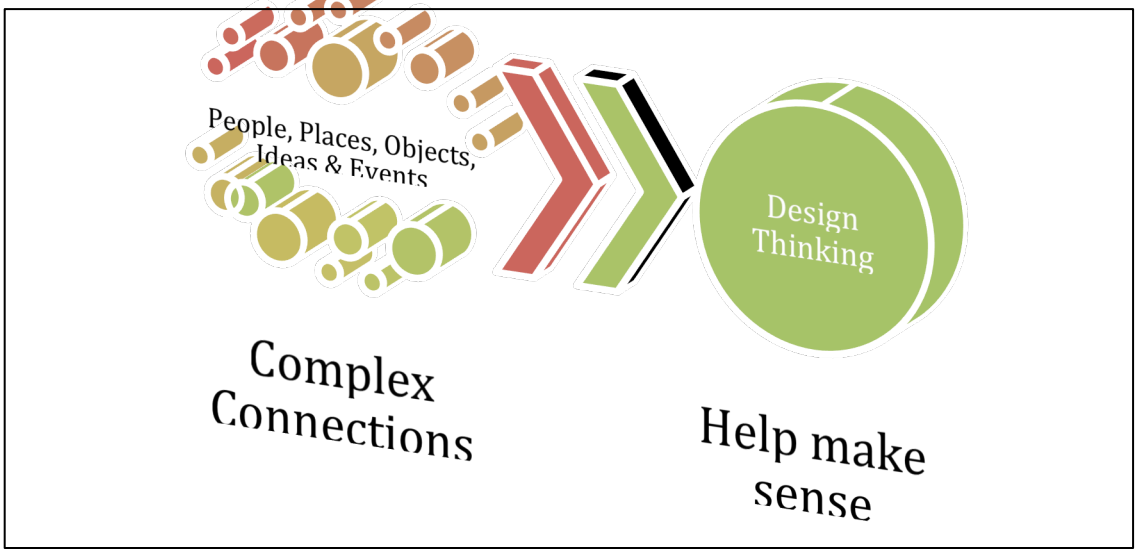


Figure 3.4: Complex perspectives of Design Thinking, inspired by Mootee (Mootee 2013, p.14)

Design Thinking can be used to generate new ideas, unlock hidden value in existing products, services, technologies and assets – reinvigorating instead of reinventing (Mootee 2013, p.16).

Design Thinking recognises that problems can be solved in many different ways; there is no right or wrong way of carrying out the process. Tim Brown refers to this as the 'continuum of innovation', which is described as a system of overlapping spaces, as seen below in figure 3.5. Within these three spaces, the project can move back and forth many times as the project team explores new directions and ideas. This iterative process of design thinking is an explorative process, through the process of gathering data, user insights can be gained that can offer new ideas and solutions which can inspire the project team to take a new path (Brown 2009, p.16-18).

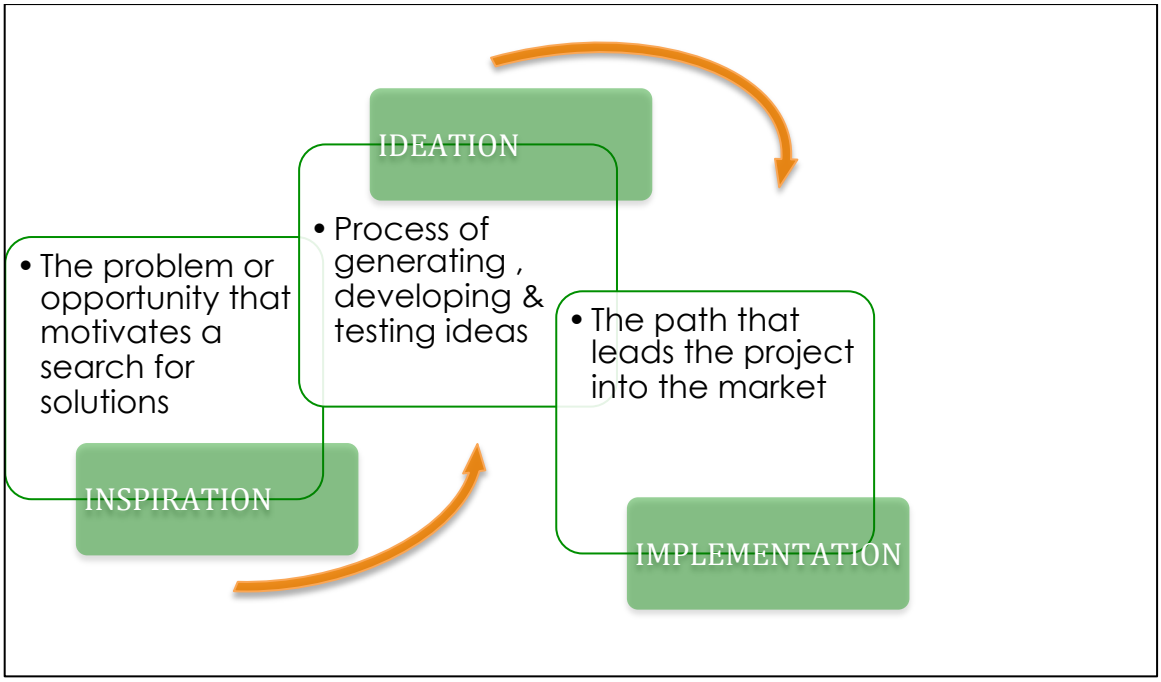


Figure 3.5: The iterative process of Design Thinking, Inspired by Brown (Brown 2009, p.16-18)

Traditionally, designers have worked with integrating the constraints of what is desirable from a human point of view, technologically feasible, and economically viable (see figure 3.6). The way companies approach the constraints of innovation and new ideas can be from three different ways:

- Working with what fits in the existing business model, this approach leads to predictable ideas which are easy for other companies to copy
- Technology based companies tend to find new innovations and then try and fit them into the business model afterwards, this can be costly as it requires heavy investment in time and resources with no guarantee for the success of the innovation
- Companies that base innovations on human desires and needs, this can result in products with a short life span and a throw away perspective by the users (Brown 2009, p.16-18).

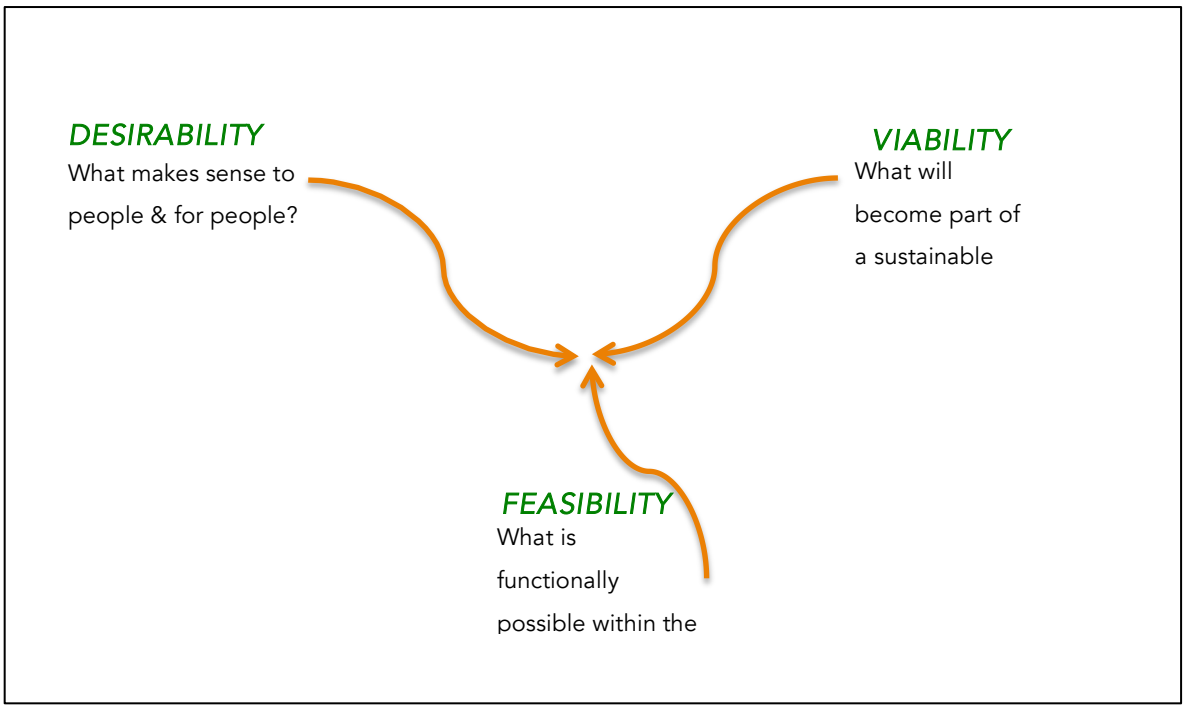


Figure 3.6:The three constraints of Design Thinking, Adapted from Brown (Brown 2009, p.4, 19)

A design thinker will balance these three constraints with an emphasis on human needs; the argument being that this focus can ensure the sustainability of innovation projects (Brown 2009, p.16-18). Design Thinking approaches problems and how to solve them from the end users perspective, which requires a deep understanding of unmet needs within the given situation and associated constraints (Mootee 2013, p.35). Working from a Design Thinking approach can seem to be more time consuming and chaotic but due to the inclusion of users in the exploratory process and constant testing, the end result should be a product or service that is accepted by the end-users and thus increases the success rates (Brown 2009, p.16-18).

To some Design Thinking might be perceived as a non-scientific discipline that does not include a data-driven analytical way of thinking. If applied properly, Design Thinking is a tool or a framework to analyse forms, relationships, behaviour as well as real human interactions and emotions (Mootee 2013, p.39).

Though the focus of this thesis is not a business case, it is believed that the Design Thinking approach presented, is beneficial in non-business related cases too. In a way, you can say the work group is trying to sell the school garden concept in Tårnby.

Design Thinking is often used to develop new products, sell more products, provide a better service, be able to compete at the market etc. from a human centred approach.

In this thesis, the user-centred approach is applied to scrutinise the Haver til Maver project in Tårnby in order to reinvigorate the implementation strategy.

It should be emphasised here, that the researchers of this thesis are not designers, but with an interdisciplinary background in Integrated Food Studies they have a holistic way of thinking and see the point in the human-centred approach behind Design Thinking. The tools, methods and thoughts behind Design Thinking are used, in combination with other theories in an attempt to shed new light in an area.

3.2. ETHNOGRAPHY AND DESIGN ETHNOGRAPHY

Ethnographic research is a mix of different data collection techniques such as observation, interviews, surveys, and archival searches. A good ethnographer will always be observing, even when carrying out other techniques such as interviews (Angrosino 2007, p.56).

The tradition of ethnographers was to 'go native' and spend months or years studying a population or culture of interest that was typically far away from their own cultures. In these types of studies the researcher was not part of the community but saw themselves as more of outside observers. Ethnography has developed over the years and has aligned itself to modern society. There is an acceptance today, that an ethnographer both affects the field of study and is also affected by it. Today there is a focus on searching for patterns in everyday life and studying what is happening at home, as much as what is happening far away (Bryman 2004, p.292-317).

Design ethnography share traits of traditional ethnography; that being to experience and understand the user's (the group of study) world, the contrast is that design thinkers are seeking to gather enough information to understand their end-users or customers (Martin and Hanington 2012, p.60). Modern society demands that change happens more quickly than it did 100 years ago and there is not the same time to spend four years studying a population to figure out what their needs and desires are. Design ethnography is also used by many disciplines today, in order to find solutions to problems in everyday life.

In order to get to know what your users' needs and desires are, a qualitative approach is applied. Quantitative data on how users view a service or product provides valuable

data in forms of graphs and diagrams, but there is a risk only to discover 'what you want to know', when in fact what the user really wants to tell is something quite different. Applying methods such as interviewing, observation, and listening to the users gives a different insight into their needs, which is not obtained through traditional quantitative methods. Interacting with the users via dialogue and observation makes it possible to dig deeper into their needs and identify cultural trends (Stickdorn and Schneider 2011, p.140).

In chapter 4, the data collection methods used in this study will be elaborated on.

4. WHAT METHODS WERE USED TO COLLECT EMPIRICAL DATA?

In this chapter, the methods of Semi-structured interviews, Observation of meetings held by the Working Group in Tårnby and Mapping of one school used for the empirical data collection will be introduced and explained in detail. Lastly related ethical issues are reflected upon.

An overview of the research participants, their positions, school garden status and when they were interviewed or observed can be seen below in table 4.1.

Table 4.1: Overview of research participants

Person	Position	Work with SG	Done	Type of Data
WG1	Working group	SG support group	28.01.14	Semi-structured Interview
WGM -1 & 2	Working Group	SG support group	15.01.14 31.01.14	Observations of meetings
T1	Teacher	Tried to start up	31.01.14	Semi-structured Interview, Tour of school, Mapping
T2	Teacher	Yes	04.02.14	Semi-structured Interview
T3	Teacher	Yes	18.02.14	Semi-structured Interview
M1	Assistant Head	Yes	18.02.14	Semi-structured Interview
M2	Assistant Head	No	12.03.14	Semi-structured Interview
Council Board Meeting	Council	Discuss School Reform	28.01.14	Observation of meeting

4.1. SEMI-STRUCTURED INTERVIEWS

The main body of empirical data for this thesis was collected via semi-structured in person interviews. A qualitative research interview is used when the aim is to get to know about and understand peoples viewpoints, meaning of their experiences, and to understand their world from their point of view; the conversation is used to learn about the feelings, experiences, life situation, attitudes, dreams and fears of others (Kvale and Brinkmann 2009, p.1). These are all aspects that are central for the user-centric approach of Design Thinking of this research.

The research interview is seen as an inter-view or inter-change of views between the interviewer and the interviewee where knowledge is constructed in the interaction between the two during the conversation concerning a shared interest in the topic of focus (Kvale and Brinkmann 2009, p.2, 17). In this thesis the interviewees are seen as co-constructors playing an active role in the production of knowledge. The researchers

keep the research questions in mind that are strived to find answers to through the interview questions, and set the scene for the interview (Kvale and Brinkmann 2009, p.2, 33-34). As presented in the previous chapter, Design Thinking relates to the explorative process of gathering data and gaining an emphatic understanding of the end-users in order to find new ideas and solutions. Therefore, the researchers attempted to enter the interview situation open minded to what the interviewee brings into it and with the expectation that the interviewees could reveal insights and bring about relevant information that was not considered beforehand. For example, mention actors, relations or situations the researchers did not know about.

Conducting an interview might seem straightforward with its similarities to everyday conversation. However, if the interview is to be a means of producing new substantial knowledge about an issue, it requires thoughtful planning, preparation and considerations about the purpose and outcome of the interview. One of the challenges of doing interviews is that few standard rules or common methodological conventions exist, as opposed to questionnaire surveys. There are no clear guidelines for interviews that answer questions such as; how many interviewees are needed, how to get started, is it necessary to transcribe the interview (Kvale and Brinkmann 2009, p.15). In a positivistic methodology, research is more likely to follow rules and predetermined steps of a specific method in the search for knowledge as given facts that can be quantified (Kvale and Brinkmann 2009, p.17-18). When it comes to interviews, the answer to the above questions will be 'It depends', meaning that it depends on the specific research situation. Many considerations and decisions have to be made by the interviewer in the situation, such as; whether to follow up on an answer, proceed to the next question in the interview guide, and how long to leave the respondent talk before possible interruption? Which make great demands of the interviewer's skills, familiarity about the interview topic and methodological knowledge about how best to proceed (Kvale and Brinkmann 2009, p.16). The researchers had some familiarity with conducting semi-structured interviews from previous work and these former experiences were valuable and were used during the interviews. Before going into the interview situation the researchers also familiarised themselves with the topic, through the State of the Art literature searches, with relevant methodological guidelines and with the Council area of Tårnby.

What characterises a semi-structured interview is that the researcher has an interview

guide with possible questions. However, the guide is not supposed to be followed point for point. It assists the interviewer in keeping focus and ensuring important issues related to the interview topic are covered (Bryman 2004, p.323). During the interview there is openness towards changing the sequence of the questions, reformulating the questions and following up on the answers provided by the interviewee (Kvale and Brinkmann 2009, p.124, 130).

The interview guides for this thesis follow the template provided by Kvale & Brinkmann (Kvale and Brinkmann 2009, p.132), see figure 4.1 below. The research questions at the left are often formulated in theoretical language whereas the interviewer questions are kept in an everyday language easily understood by the interviewee (Kvale and Brinkmann 2009, p.132). The interview questions are based on the research questions that should lead to answering the problem formulation, as well as the pre-knowledge obtained from literature search and attended meetings and workshops. The pre-knowledge about the interview topic ensures the ability to pose relevant questions (Kvale and Brinkmann 2009, p.105-06). Again, in order for the researchers to keep focus an extra column with prompts were added to the interview guides, including important key words to what the researchers were looking for during the interview. The interview guides can be found in appendix C.

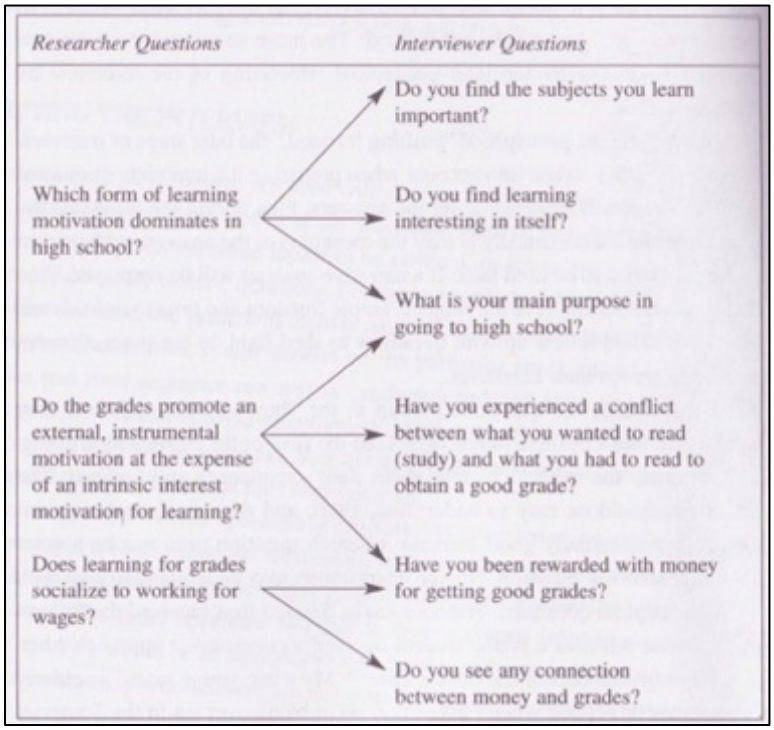


Figure 4.1: Example of an interview guide (Kvale and Brinkmann 2009, p.132)

Establishing good contact by showing respect, interest and active listening are crucial in the beginning of the interview in order to create an open and relaxed atmosphere where the interviewee feels able to feel free to speak (Kvale and Brinkmann 2009, p.128). The opening question of the interview was aimed at making the interviewee feel comfortable, by asking into their job position, as this was considered an open question they could easily answer.

In line with an explorative approach, where bringing in new insights are valued more than keeping to the exact same interview guide throughout the research (Kvale and Brinkmann 2009, p.112), the interview guides were not seen as fixed and experience and knowledge attained from previous interviews were used to adjust and improve the following interview guides. The interview guides were adjusted according to whom was going to be interviewed, as the interviewees' positions differed.

The in-person interview also provides the possibility to acquire a sense of who the person is and observe how they answer, what is being said and not said, the expressions they use and their body language, which is not included in the later transcription text (Kvale and Brinkmann 2009, p.127-28). In order to be able to remember these impressions, time was spent summing up after each interview, noting down the overall impression, thoughts about the interview person, and how it went.

A disadvantage of the interview situation is the risk that the interviewee answers according to what they believe the interviewer wants to hear (Kvale and Brinkmann 2009, p.58). In this thesis an attempt was made to overcome this by instructing the interviewees that no right or wrong answers existed; their meanings, and experiences were what mattered.

Another common critique of qualitative interviews is that findings may not be reproducible between subjects, for example, because the outcome of the interview and the knowledge produced can vary due to the interviewers knowledge and sensitivity to the interview topic (Kvale and Brinkmann 2009, p.58).

The timeframe of a project can also be a challenge, as transcribing, analysing and reporting are time consuming activities. The number of interviewees participating in the

research was based on a combination of what was possible within the time frame allocated for the research and on the certain conditions being met. These conditions were partly based on the State of the Art, from which it was stated that the managers are an important part of implementation of school gardens and their chance of success, thus it was important to include their perspectives in the research. The conditions were also based on the exploratory nature of the research and the researchers curiosity of whether the perceived challenges and opportunities differed according to the school garden status within the school, thus teachers from schools with varying status were included. Due to the time limit in the thesis it was important that the number of interviews carried out was realistic in terms of making a thorough analysis afterwards (Kvale and Brinkmann 2009, p.112-13).

The interviewees were found from snowballing, where initial contact is made with one person or a group of people that are relevant to the research area and who then assist in establishing contact with other actors (Bryman 2004, p.100-02, 332). In the case of this thesis, the coordinator of the working group assisted in pointing out suitable people, ensuring the interviewees were relevant in relation to answering the research question. The coordinator is also a consultant for science subjects in the council, and had a broader insight into what is going on at each of the schools. The coordinator was therefore considered to be a key person in relation to gaining access to relevant interviewees.

To gain a broad perspective on the problem area, people from both managerial and teaching levels within the school system were included. Two schools that had succeeded in implementing a school garden[4], one had attempted but not managed to sustain implementation and one had not tried at all, were included in the research. The interviewees were distributed as follows:

- Two managers; one from a school not working with school garden (M2) and one from a school that has succeeded in integrating Haver til Maver (M1) as part of the school day and curriculum.

[4] One of these schools was a Special school within Tårnby Council area and has slightly different conditions than the mainstream schools.

- Three teachers; one who had attempted to start up a school garden (T1), but did not succeed in maintaining it, one teacher at a school where a few classes and teachers work with it (T2) and one teacher that has had great success with their school garden (T3).
- The working group coordinator (WG1) was also interviewed to gain knowledge about the how the working group operates and how the Haver til Maver project was initiated in the council area.

As mentioned earlier, due to the difference in their positions in the school and the status of their work with the school gardens (see above for the overview, in table 4.1), the interview guides differed slightly according to who was being interviewed.

In total six semi-structured interviews were conducted in the period 28th January 2014 till 12th March 2014. The interviews took place at the interviewees' workplace that was agreed on in order to make it as easy and convenient for them. Each interview lasted 30-45 minutes and was audio-recorded to make sure all details were kept for the later analysis and at the same time avoid taking notes, hence being able to focus completely on the interview situation and the interviewee. By audio-recording the interviews, answers from the interviewees are captured in their own words and can assist the interviewer in better recalling the atmosphere in the situation (Bryman 2004, p.327-30). The audio-records were then transcribed word for word. Both researchers were present at all interviews; one being the main interviewer and the other the secondary interviewer who at the same time kept track of the interview guide and made sure that no important or relevant questions were overlooked.

4.2. OBSERVATIONS

Observation is one of the data collection techniques introduced above. As opposed to the observations made in everyday life by laymen, which relies on our human ability to make judgements based on common sense, academic observation is more systematic and formal (Angrosino, 2007, p.56).

Due to the nature of ethnographic observation, which is conducted in the field, the ethnographer will always be involved at some level in the setting that they are observing. There are different classifications of these levels, generally they move from observing the situation from the outside and not participating in the group dynamics at

all or on the other hand, becoming part of the group studied and is actively involved in the daily routines of the group. Within these classifications there are also considerations as to the degree the researchers inform participants of their involvement such as, a completely covert role where the observer is unknown to the participants to more overt roles where the observer informs the participants of the reasons for the research and why they are involved (Bryman 2004, p.294, 301; Angrosino 2007, p.54-56, 63).

The use of observation as a technique in research projects, is appropriate in specific settings, events and when researching demographic factors. It is beyond the scope of this thesis to immerse in culture or certain behaviour of a group for several months or years. Instead, elements of observation were applied in the form of attending Working Group meetings, one local council meeting and a mapping activity, which was also carried out at a school (Bryman 2004, p.302). Meetings can be classified as events, as they take place at a specific location, involve many people and have a pre-defined purpose (Angrosino 2007, p.56). During these meetings, the role of the researchers was considered to be mainly as total researcher and to some extent researcher-participant, as defined by Gans (1968). In the former, the researcher is only partially involved in the situation so the function as a researcher is not lost, in the latter the researcher observes without any personal involvement as in a public meeting. As a third role, Gans has the total participant. These roles relates to the researchers level of emotional and behavioural involvement with the people being studied and the degree the researcher operates as a participant or observer and reporter. Being behaviourally involved does not necessitate emotional engagement (Gans 1968, p. 302). As opposed to semi-structured interviews, most of the time the researchers did not interfere in the meetings, it was the Working Group who had an agenda and was in control of the meetings. In a few occasions however, a more active involvement took place by asking questions or being addressed by the participants being observed, thereby breaking out of the total researcher role. This also indicates, that the participants did not at all times consider the researchers as being outside the situation, but as individuals. In the case of this thesis the researchers take on a role as being overt (Bryman 2004, p.294); the participants are fully aware of the researchers' identity and aim of their presence. Observing the meetings provided insight in how the group work together, what they have done to spread the Haver til Maver project and what communication strategies had been made use of. This was useful information in order to develop the interview guides. No specific questions or points of focus were made prior to the observation, as the point of the

observations was not to find answers to specific questions but to gain an overall impression of the working group, their strategies and challenges.
Two Working Group meetings have been attended in January 2014. The meetings took place at the Working Group coordinator's workplace and lasted 1-1½ hour each. During these meetings handwritten notes were taken. As the Working Group consists of only three members and the tone is quite informal, handwritten notes were considered most appropriate; audio recording or taking notes on computer seemed too intrusive and taking up too much focus. This is shown in the quotation below by Angrosino, the phenomenon is the Working Group meeting and the instruments are pen and paper that have been used to record what was seen and heard by the researchers:

"Observation is the act of noting a phenomenon, often with instruments, and recording it for scientific purposes" (Angrosino 2007, p.56).

The notes were written almost word for word, and it was noted who said what. After the meeting, the notes from both researchers were compared and discussed in order to combine them into one document (found on the included USB stick).

4.3. MAPPING SPACES & TOUCHSTONE TOURS

The study and practice of making maps is called cartography, and is a tradition that goes back centuries, traditionally visualising a specific place or geographical area. The art of cartography is typically a process of inventory, qualitative analysis and legitimisation of future plans. J.B.Harley as cited in Corner (1999) however, argues that:

"...maps are too important to be left to cartographers alone" (J.B.Harley, Cited in: Corner 1999, p.221)

Despite technological advances, Corner argues that the art of cartography is still very positivistic. If mapping is to live up to the ideal of being a way to mirror reality then it has to introduce a social dimension as well (Corner 1999, p.221). Corners statement that maps are too important to be left to cartographers alone is taken a step further in the thesis, as the researchers are bringing mapping methods into design thinking with an interdisciplinary approach.

"Acts of mapping are creative, sometimes anxious, moments in coming to knowledge of

the world, and the map is both the spatial embodiment of knowledge and a stimulus to further cognitive engagements" (Cosgrove 1999, p.2).

The researchers see that Cosgroves view reflected in the quotation above, that mapping should be seen as a creative process in which the central focus is on the design process of mapping more than on the finished product can be reflected in a Design Thinking perspective. The process of mapping can be used to gain an overview of a situation, from this an overview of possible problem areas can be seen and then solutions emerge (Corner 1999, p.216-17).

Mapping can be a user-centred technique, in that it can be used to delve into complex realities in the specific environment. It can be used to make sense of this reality; this tends to result in solutions that are more widely accepted by the users. In contrast to situations when higher powers form a solution through typical planning methods and implement it using a top-down approach (Corner 1999, p.228). In relation to this thesis, mapping the school will be included in the examination of the communication between the Working Group, teachers and managers from the users perspective. Thus attaining a user-centric approach, which ensures the emerging solutions can be translated into recommendations that are relevant to them.

Touchstone Tours can be a tool to map large environmental spaces, homes, rooms, environments such as backpacks or purses, or even a virtual space where the participant guides the researcher through for example, personal methods of desktop and file organisation on their computer or other electronic devices. A Touchstone Tour is a guided tour that provides insight into the world of a user and can help the researcher to understand how the user organises information and systems using spaces and cognitive artefacts. It takes place in a natural setting where the person is more likely to feel comfortable by being in familiar surroundings. It is recommended to use photos, videos, or sketches and notes of the conversation taking place in order to document the guided tour. Data collected from a Touchstone Tour is useful for exploring and gaining knowledge and acquaintance within a certain field early in the process (Martin and Hanington 2012, p.184).

In the case of this research study, the Touchstone Tour uses a mixture of instruments in order to take photos, and notes from conversations and observations as documentation. The documentation has been used to develop a physical mapping of the area studied,

which shows a teachers journey around a school in relation to all the possible communication touchpoints they meet during a typical school day. This mapping is then used to find the problem areas and opportunities for communication of the Haver til Maver project within the school.

Permission to have a walkthrough around the school was provided by one of the teachers interviewed, in order to gain a deeper insight into the world of teachers and how their daily work life is in a school. The tour took place in continuation of the semi-structured interview. When mapping, the activities of a specific individual or group of individuals are followed. The aim is to learn more about people, and their social behaviour or interactions (Martin and Hanington 2012, p.184); in this case communication touch points were the focus of the tour.

During the tour, many pictures were taken to document what was seen and to be able to remember what was observed and experienced. Afterwards the researchers discussed the experience and wrote down impressions and points of interest, such as noises, smells, and feelings can be hard to capture in a picture (see appendix D).

The materials collected were used subsequently to make a Storyboard depicting how the teacher moves about at the school. This will be elaborated on in the data analysis, in section 6.3.

4.4. ETHICAL CONSIDERATIONS

When doing research involving others, that being actors or actants, it is always crucial to consider how to encounter them before entering the field. Though as a researcher going into the field with an interest in and an aim of researching a field or phenomena, testing a hypothesis or producing new knowledge, this should never be done at the expense of those you encounter, in fact it may even be to their benefit. The responsibility to ensure ethical criteria are kept rests on the researcher; a responsibility that lasts throughout the process and beyond, from collecting data in the field, to writing up the project as well as afterwards (Pryke, Rose, and Whatmore 2003p. 105). The consequences of the research need to be taken into account for the subjects directly involved, as well as for the wider society; can the knowledge produced affect in a broader context (Kvale & Brinkmann 2009, p.312-15). Considerations of how you handle and present the information gathered and the extent, to which you stay true to

it, is also of an ethical consideration especially in relation to interpretation (Pryke, Rose, and Whatmore 2003, p. 106). As the aim of the thesis is to end out with recommendations for the working group of how to spread the concept of Haver til Maver in Tårnby, carrying out the research was considered to indeed be beneficial to the working group, and others interested in the area.

Before conducting the data collection, informed consent (Pryke, Rose, and Whatmore 2003, p. 118-119; Bryman 2004, p. 511-513) was ensured by instructing each participant about who the researchers were, where we come from, the aim of the research, how long the interviews would take, who was going to read the final report and have access to it. Furthermore, the participants were ensured anonymity in order to protect their privacy (Bryman 2004, p. 513-514), their names and identities were deleted from the transcripts and the field notes from observations. In all cases, participants allowed the possibility to mention the name of the school if needed. Permission to record the interviews and take pictures during the Touchstone Tour at the one public school was obtained orally.

Care was taken to treat the participants with respect, ensure they felt comfortable and at ease, did not feel intimidated and that the tone was open and curious and neither judgemental nor patronising, this ensures that the participants vulnerability and integrity is protected. The participants were also well informed about the nature of the research and what it would be used for thus maintaining the participants' autonomy (Blackburn 2001, p.84).

When taking pictures in the school, we did not take pictures with recognisable faces in them; the focus was more on spaces and places than people.

The Persona is based on a mix of characteristics from many of the interview participants instead of a single person, in order to ensure full anonymity for interviewees. The picture of the Persona is also a model and not based on a research participant.

5. THEORETICAL FRAMEWORK

The theories presented in this chapter are used in this thesis to understand and analyse the empirical data in chapter 6, develop recommendations for the Working Group in chapter 7 and then a discussion of the findings and future perspectives in chapter 8. Firstly, an introduction to the Theoretical Framework and the link between the theories will be presented. Next, each of the three areas is presented one by one. First, Communication-Planning theory will be presented. Then, Situational Analysis & Mapping from Adele Clark will be introduced. Lastly, the Design Thinking tools of Customer Journey Mapping, Persona, and Storyboard will be explained.

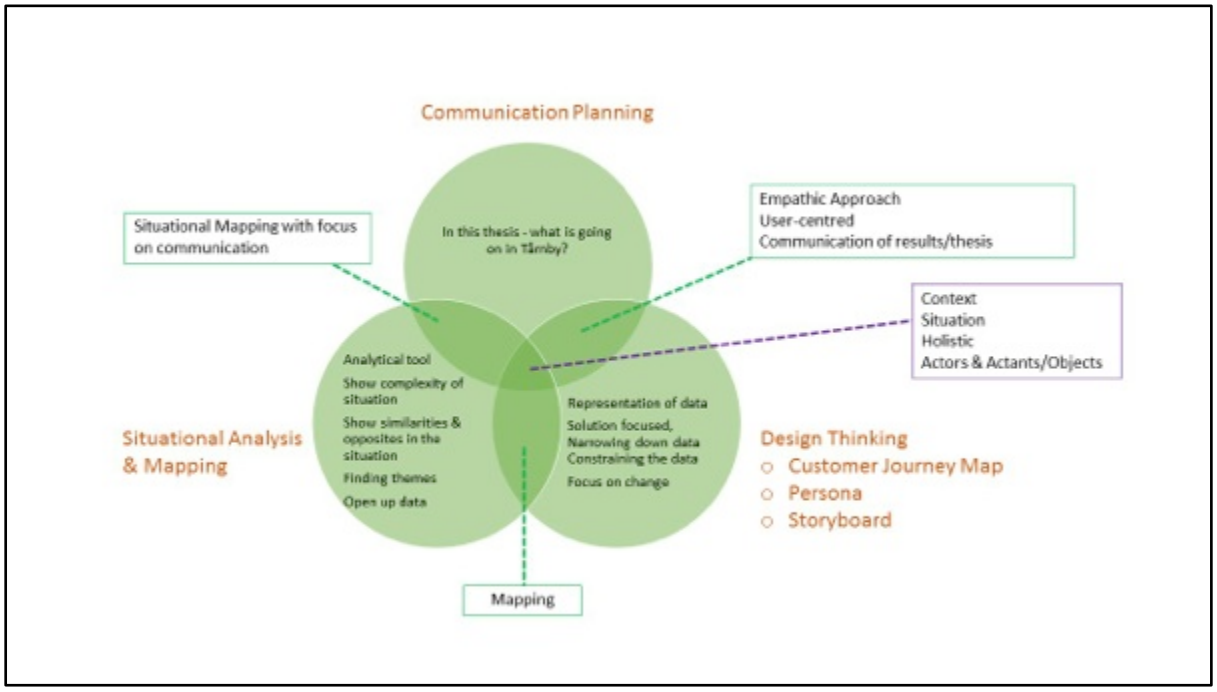


Figure 5.1: Theoretical Framework

The Theoretical Framework for this thesis is depicted in figure 5.1. This shows how the theories overlap and what they contribute individually to the thesis. What they all have in common is a holistic focus of what is going on in a certain situation. This means studying phenomena in their context. All of them also include actors. The actants in Situational Analysis & Mapping correspond to objects in the Design Thinking. Actors in the Communication Planning are represented as receiver and sender, and actants/objects as channels and mediums.

Situational Analysis & Mapping is an analytical tool used to analyse the complexity of a situation, and identify whom and what matters in the situation. Besides the actors and actants it includes a focus on discourses that drive the context of the problem or situation. The tools of Customer Journey Mapping, Persona and Storyboard are seen to compliment the Situational Analysis & Mapping with emotions and attitudes, which can give a deeper understanding of the users motivations and needs. Once the Situational Maps are made, they will be used to develop the Customer Journey Map, which then gives a visual overview of the world of the Persona in a specific situation. The elements found in the Situational Maps that are seen to make a difference will be transferred to the Customer Journey Mapping and included in the visual representation.

Design Thinking has a user-centred approach, an aspect that is also important when it comes to communication and increasing the chances that a message reaches an intended receiver. For the sake of this thesis, applying a design approach and gaining insight into the receivers (end-users) of the information about Haver til Maver aims at tailoring the communication to the users-needs. Where Situational Analysis & Mapping is seen as an analytical tool, the tools within Design Thinking are practical when looking to the future and creating change.

As many things can interfere with the communication process and have an impact both on how the message is received and how it is acted upon, a holistic approach will be taken. As will be described in the Communication Planning, a person might adopt a message positively, but still not act on it, for example because of lack resources or skills. In order to gain a more holistic picture of the context, challenges and opportunities related to school gardens were looked into from a broader perspective than only communication. Understanding the broader context informs about what challenges have to be overcome, and how to tackle these via communication while at the same time acknowledging that maybe not everything can be solved through communication.

Each of the three areas in the Theoretical Framework will be explained in more detail in the sections that follow.

5.1. COMMUNICATION

In this section the role of the communication planner will be explained and some basic concepts of communication are presented. As presented in the introduction, this thesis

will use Communication Planning theories to analyse how the Working Group in Tårnby Council have communicated to their users (the schools and their actors) and how the users have received the communication messages. Through analysing the sender's (the Working Group) and receivers' (the user) experiences, a better understanding of both the Working Group, and the schools and their actors will form and then the Theoretical Framework can be used to suggest solutions for the future communication strategies of the Working Group (Windahl, Signitzer, and Olson 2009).

The public arena of communication today is becoming noisier and noisier. There are many competing messages fighting to be heard by the public. Planning communication can be a way to target the message to the users so that it wins their attention and has a bigger chance of success (Motee 2013, p. 55).

The role of the person planning the communication differs depending on the aim of the communication; getting people to talk to initiate a communication process, or more structured and specific as in for example, a campaign (Windahl, Signitzer, and Olson 1997, p.19). A communication planner can be anything from a fulltime employee doing communication for a large company to someone who dedicates a few hours of their spare time handing out flyers for the local sports club. Opportunities to plan communication exist at many different levels; national information programs, local community projects, or the small-group level where people meet around a shared interest. In any case the person planning communication should aim at finding the most effective use of available resources in order to achieve the intended goals (Windahl, Signitzer, and Olson 1997, p.20).

The process of planning communication is recommended to contain elements of both creativity and systematic thinking. The creative can be in the form of finding new solutions and out-of-the-box thinking about how to find new ways of communicating and wording the message in novel ways. The systematic aspects include ensuring that all relevant target groups are reached, the message distributed in appropriate ways, and evaluation is carried out (Windahl, Signitzer, and Olson 1997, p.20).

Gaining knowledge about the receivers increases the chance of succeeding with the communication message and reaching the intended target group. This includes taking an empathic approach and trying to understand how others perceive and interpret

reality, without letting this replace one's own way of viewing this reality. This means trying to figure out how others react from their position and reality. Hence, the more the communication planner learns about the receiver the better, as it will then become easier to plan from an empathic approach. However, in many cases it is a challenge that the communication planner has no direct contact with the receiver/target population (Windahl, Signitzer, and Olson 1997, p.21). Social perspective taking is related to empathy, this is the ability to understand the options available to others. This implies that even though the receiver acknowledges the message, the person might not be able to act in accordance to it due to the lack of resources required, or because of religion or culture. Situational Theory of Publics refers to this as "constraint recognition"; the degrees that people perceive constraints exist in a situation that limit their opportunity to plan their own behaviour. The result of high constraint recognition is that people do not seek messages about the problem at focus (Grunig and Hunt 1984, Cited in: Windahl, Signitzer, and Olson 1997, p.22). The smaller the social and cultural gap between sender and receiver, the higher social perspective taking and the higher the chance of succeeding in the communication.

When communicating complex messages, a disturbance-free environment is necessary (Windahl, Signitzer, and Olson 1997, p.22). This means that the more elements that can disturb the message the lower chance that it will reach the intended receiver. Reardon (1987) says that, "situational knowledge" is the knowledge about and the ability to assess what is appropriate and effective to communicate in a certain situation (Reardon 1987, Cited in: Windahl, Signitzer, and Olson 1997, p.22).

Realising that communication always takes place in a context, and analysing the context and the conditions that can affect the communication provides a more holistic communication approach, that is of great benefit to the communication planner (Windahl, Signitzer, and Olson 1997, p.22-23). There can be several different solutions to one communication problem; the art is to find a solution that will be received positively by the target population. Through carrying out analysis of the users targeted and the context of the situation, communication can be planned to achieve more effective results instead of sending out random information and messages (Windahl, Signitzer, and Olson 2009, p.1-6).

When planning communication short-term as well as long-tern goals should be

considered, though with a main focus on the long-term planning. Planning from the bottom up instead of top down is emphasised and communication should aim for broader, more general goals than the more fixed and specific goals of campaigns. In accordance with a Design Thinking approach, communication should be viewed from the perspective of the receiver, not the sender (Windahl, Signitzer, and Olson 1997, p.19). Involving the receivers in the process is one way to make information more interesting and relevant, and thereby more likely to reach the intended target (Windahl, Signitzer, and Olson 1997, p.32).

Before treating something as a problem that can be solved by communication, one needs to make sure that the problem to be solved is in fact a communication problem. Two criteria have to be fulfilled in order to call something a communication problem:

1. The problem results from a lack of or the wrong type of communication.
2. The problem can be solved with help of communication (Windahl, Signitzer, and Olson 1997, p.30)

There is a risk of treating a problem as something it is not, if the problem is not first assessed to find out if it is at all a communication problem (Windahl, Signitzer, and Olson 1997, p. 30-31). Once the above-mentioned two criteria have been fulfilled then the process of solving the problem can be initiated. The solution to a problem can fall into one of three categories:

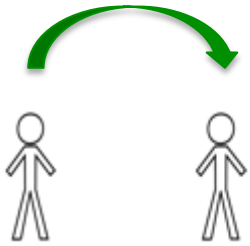
- One that can be solved by communication alone
- One that can be solved by communication combined with other means
- One that can only be solved by other means (Windahl, Signitzer, and Olson 1997, p. 31).

In many cases the first category is not enough to solve a problem alone. Especially in cases where change of behaviour, personality or lifestyle is the goal, communication will have to be supplemented with other methods (Windahl, Signitzer, and Olson 1997, p. 32). The problem area for this thesis has been assessed to be a combination of communication and other means. In the problem area in chapter 2, figure 2.2 presented the communication problem in relation to what the Working Group have done so far in terms of information around school gardens. The thesis investigates the problem in a

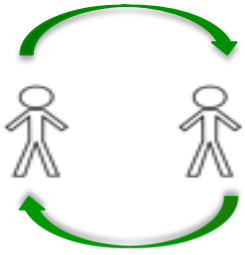
wider context, thus including general opportunities and barriers in order to discover where the communication problems are in relation to other barriers. Moreover, the aim of the communication is to encourage people to act and therefore more than just communication is required.

To get an overview of how much of a problem can be solved by communication, a Goal/Means Inventory is a tool to use. A main goal is stated and subsequently sub goals of how to achieve this are listed. This can aid identification of whom to target in the communication. It can also assist in identifying if communication is the main solution for the entire problem (Windahl, Signitzer, and Olson 1997, p.33).

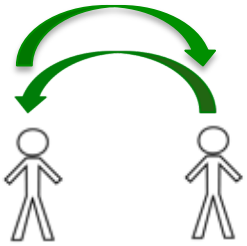
When planning communication there are some important conceptual tools to be aware of in order to ensure achievement of effective results. Concepts are used for two purposes, for the communication planners to understand both their own motives and what they are trying to achieve and secondly, to communicate this clearly to others (Windahl, Signitzer, and Olson 2009, p.11).



There are many definitions of communication but they can be separated roughly into three ways of thinking. The first is a linear definition of communication. These definitions deal with how communication is transferred from one person to another person or group. These types of communication can be defined as 'Sender-message-channel-receiver'. The linear model is a one-way process that is seen to be more authoritarian, as the sender has most control over the process (Windahl, Signitzer, and Olson 2009, p. 12-15).



The second way is a two-way circular process, which is more balanced in terms of power relations. But a two-way process can be an illusion if for example, the sender has already decided on a solution when offering the public the chance to make suggestions (Windahl, Signitzer, and Olson 2009, p.12-15). In this model the concepts of feedback and feedforward are incorporated to make an interactive process, these concepts are elaborated on further on in the section.



The third line of thought is based more on people reaching shared understandings of concepts and ideas that result in 'Mutuality and shared perceptions'. This process is also interactive but is much more a dialogue from within and between the different parties. It is about constructing solutions together.

Due to the increasing use of technologies and shared communication platforms, the traditions of communication have moved from the linear model to the shared perceptions models. Virtual communication platforms have a stronger focus on people being participants rather than either senders or receivers of information; they also provide a much bigger platform for information sharing than traditional communication methods (Windahl, Signitzer, and Olson 2009, P.12-13). This makes it more difficult to see who the sender and receiver is and also creates an individualistic view of interpretations of messages as there is so much information to choose from and a person has to select what they find is most important to them in the situation.

As stated, sometimes it can be unclear who the sender of the communication is, there can be many parties involved in sending a communication message, such as: the initiating sender, the communication technician, the planner and the pseudo communicator. It is therefore important that reactions by the target populations to the sender are considered beforehand (Windahl, Signitzer, and Olson 2009, p.15-17).

The differences between the two concepts of Medium and Channel are subtle and they are therefore often referred to as substitutes for one another. O'Sullivan et al. (1983) have developed definitions for each of these concepts, as follows:

Channel: "the physical means of carrying a signal" (O'Sullivan et al. 1983, Cited in: Windahl, Signitzer, and Olson 2009, p.17)

Medium: "an intermediate agency that enables communication to take place " (O'Sullivan et al. 1983, Cited in: Windahl, Signitzer, and Olson 2009, p.17)

The channel refers to the ability to carry the information. The medium occurs through the use of channels. It can be a good idea to define the channels and media available in

order to plan the communication strategy thoroughly (Windahl, Signitzer, and Olson 2009, p.17).

It is important to define who the intended receiver is when planning communication as there can be a difference between who the intended receiver is and the actual receiver. To avoid confusion these groups can be split into two groups. The term target population (TP in the figure 5.2 below) can be defined as the people whose attitudes, knowledge or behaviour are to be influenced by the communication. The term receiver group (RG in the figure 5.2 below) can be used to define the people for whom the message is intended (Windahl, Signitzer, and Olson 2009, p.18).

Below, four communication models are shown and explained that visualise different strategies for defining the relationships between target population and receiver groups.

Although problematic, strategy 1 is the most common strategy when planning communication. It shows that the target population and receiver group are perceived as being the same. This is sometimes necessary when the aim is to send the same message out to everyone, but the reality is that populations are seldom homogeneous and it can enhance the results of the communication plan to be more specific.

Strategy 2 shows a situation where the receiver group is found inside the target population. This can happen in situations when one person is found who can represent their own department or team. This person is then expected to go communicate back to the rest of the population what they have learned. This strategy is open to some interpretation by the receiver group, who can then selectively choose with what and how they pass on information to the target population. Sometimes this enhances the message, as the receiver group can adjust the message to suit the target population due to the fact that they know them well and sometimes it can be a disadvantage as parts of the message are lost in the translation. The communication planner has little control over the message once they have given it to the receiver groups using this strategy.

The next strategy shows the receiver group is outside of the target population. This happens when another group is chosen to portray the message to the target population, like in strategy 2. But the receiver group are not part of the target

population and are not to be influenced by the message in any way. The risk in this strategy is that the receiver group do not understand the target population as well as in strategy 2.

Strategy 4 is when the target population are situated within the receiver group. This is when for example a campaign is launched to reach the whole group but only a part of the group are the target of the information. The risk here can be that people in the receiver group are put off and alienated due to the insignificance of the message to them (Windahl, Signitzer, and Olson 2009, p.18-22).

Figure 5.2: Difference between receiver groups and target populations (Windahl, Signitzer, and Olson 2009, p.19-22)

From the above four strategies it can be seen that it is important to consider the groups to be influenced by the communication plan and to assess the kind of result that is expected from the plan and the effects it will have on the population. It is also important to be aware of the possible consequences of initiating the communication plan on other areas of action in the school district (Windahl, Signitzer, and Olson 2009, p.22-23).

There are three main areas that are relevant when dealing with a communication process:

1) A focus on what is expressed in a message
2) A focus on how the sender of the message intended it to be understood
3) A focus on how the message is actually understood by the target population

Many problems can be avoided through communication planning that has a focus on the above issues and an awareness that there can be an intended meaning/received meaning gap' (Windahl, Signitzer, and Olson 2009, p.17-18).

In relation to solving a problem via communication, identifying the cause behind the problem and who is responsible or to blame can further help to identify who to target, in what way and with what message. Generally, the distinction is between "system blame" and "individual blame" ways of thinking; the former blames the social system and the latter place responsible for their own problems with the individual. This has an influence on how to solve the problem and how the communication is received. A mixed approach, where the individual as well as the system is targeted, is often most likely to succeed (Windahl, Signitzer, and Olson 1997, p.33-34).

As mentioned earlier, when planning communication the two strategies of feedback and feedforward are important to consider, if a user-centred approach is taken in the planning then the chance of the communication being effective is much improved. The more the planner knows about the situation and needs of the receivers the better; feedback and feedforward are two ways for the planner to learn more about these needs and attitudes. Feedback relates to the receivers reactions when the message is conveyed to them. It is not always possible to learn about this spontaneous feedback if the planner is not present when the message is received but indicators of these reactions can be found in for example sales figures, or in the example of this thesis by noting how many receivers approach the working group for help. Feedforward is about gathering all the information available to the planners on the receiver group and how they might react to the message in the future (Windahl, Signitzer, and Olson 2009, p.23). There are different feedforward strategies that can differentiate between the degrees to which and the level to which a receiver is involved in a communication process, in order to gauge their reactions.

The complexity of a message and motivation of the receiver affect the sink-in time; the more complex the message and the less motivated the receiver, the more time required for the communication process. In a communication process that aims at motivating people to take action, informing people is often much easier and quicker than actually make people act, which might be more time consuming and require more than just information; for example, teaching how to do it and more interpersonal communication

(Windahl, Signitzer, and Olson 1997, p.23). Taking into account the timing of the message is another relevant factor. This can been seen both in relation to the message itself as well as other external events or projects, which can influence both positively and negatively (Windahl, Signitzer, and Olson 1997, p.24). Reach, frequency and the right level of exposure are issue that relates to timing. According to VanLeuven (1986), reach is most important when creating awareness, whereas frequency is more important in holding already converted publics, as well as frequency is necessary in order to place an issue on the public's agenda initially (VanLeuven 1986, Cited in: Windahl, Signitzer, and Olson 1997, p.25).

Depending on the aim of the communication planning, taking into account the space should be part of the planning. Informal communication between colleagues at a workplace is for example, less likely to take place if there is no obvious place for people to meet and talk. Where the message is delivered is important as well. Assessing where people would pay attention to or have the possibility to read different messages can be a great help in succeeding with the communication (Windahl, Signitzer, and Olson 1997, p.25-26). Insights into how a certain social group communicate, and if special terms/expressions are used, can further assist in catching the receiver by adjusting the message to the culture and norms of the group. An individual is often part of one or more social groups, which can affect the individual choices (Windahl, Signitzer, and Olson 1997, p.26-27).

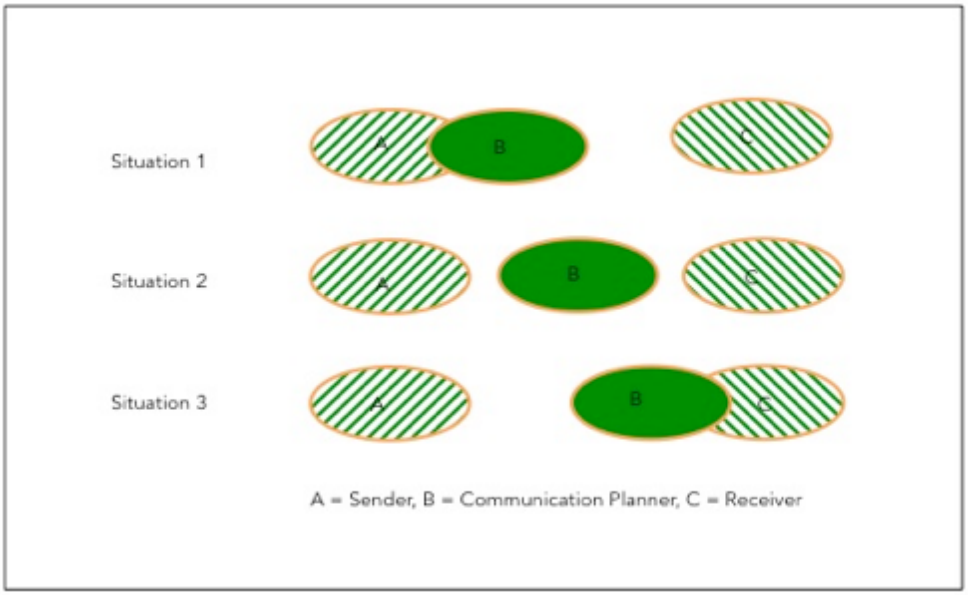


Figure 5.3: Relationship between sender-communication planner-receiver (Windahl, Signitzer, and Olson 1997, p.27-28)

The relationship between sender-communication planner-receiver and how the viewpoint of the communication planner tally with the sender and receiver's, can be described from three different situations as shown in figure 5.3. In situation 1, the communication planner is oriented more towards the sender (or employer) than the receiver (or client). In situation 2, the communication planner is not oriented more towards either sender or receiver. Here the communication planner can be considered to have a professional stance and taking into account needs of both sender and receiver. In situation 3, the communication planner is oriented more towards the receiver/client than the sender/employer. Communication tends to be more effective when the parties involved share common characteristics. Opinion leaders can be used to bridge the gap between planner and receivers (Windahl, Signitzer, and Olson 1997, p.27-28).

Communication strategies can be categorised according to whether the problem is defined by people outside the system or from within the system. Table 5.1 below shows an overview of Windahl, Signitzer and Olson's taxonomy of communication strategies. On the left hand side, the definition of the problem and where the goal arises from are shown. The top of the table shows who defines the communication solution. The sender and receivers positions are shown according to how and where the other elements are positioned (Windahl, Signitzer, and Olson 2009, p.54-58). Depending on the strategy used, the role and involvement of the communication planner changes. For example, the traditional communication campaign can be seen as an undemocratic and authoritarian way of communication because the problem and the solution are both defined from outside the system, in this situation the sender decides the goals and message content and the result can be a demotivated receiver who feels that the sender is just telling them what to do.

Table 5.1:Who defines the problem, goal & solution? (Windahl, Signitzer, and Olson 2009, p.54-58)

		Who defines the communication solution?	
		OUTSIDE THE SYSTEM	**INSIDE THE SYSTEM**
Who defines the communication problem and the goals?	**OUTSIDE THE SYSTEM**	**1** Traditional communication /information campaign Much critique that this is often the preferred model. Seems undemocratic and authoritarian. Often only way to create change. **Role of sender:** *Sets the goals, has control of message content& formulation of goals* **Role of receiver:** *Not easily motivated by this strategy when communication comes from outside*	**2** External impetus requiring internal follow-through External initiative **Role of sender:** *Inexpensive. Do not do much to encourage the initiative other than promoting the goal, but hope the receivers react to the message. Do not have much control over subsequent process.* **Role of receiver:** *Hard to motivate when goals are set by others. But hope is they react and pull together to find solutions.*
	INSIDE THE SYSTEM	**3** Internal impetus requiring follow-through Communication support **Role of sender/people outside system:** *Mixed strategy. Reacts to information from receiver about a problem* **Role of receiver/social system:** *Problem & goal is defined by them and thus are highly motivated*	**4** Grass roots initiative **Role of sender/people outside system:** *Cost free strategy* **Role of receiver/social system:** *Goal setting and decisions come from this group. Highly motivated.*

One of the drawbacks of communication is that the sender has limited control of how the message is received, as the receiver can decide to ignore the message. Often communication cannot do much more than appeal to people and come with alternative suggestions that are remote to the receiver. When it comes to solving problems where change is the goal, communication alone is in many cases not a very strong method. Kurth (1981) introduces the "Three E's" as a way to reach a goal. The "Three E's" stands for Education, Engineering, and Enforcement of which only the first one can be considered completely communication-centred. Education refers to educating the relevant actors. Engineering relates to the physical environment. Enforcement deals with how to motivate people. The "Three E's" is used to examine possible solutions and goals. Combining approaches from all the areas into a coherent whole creates a greater chance of reaching the goal (Kurth 1981, Cited in: Windahl, Signitzer, and Olson 1997, p.34-36).

When solving problems factors such as resources, organisational and system structures are important to take into account as well. However, despite its limitations planned communication can be useful. According to Hornik (1988) communication can have different roles as listed below, with the following functions:

Table 5.2: Roles of communication and their functions, by Hornik 1998, (Hornik 1998, Cited in: Windahl, Signitzer, and Olson 1997, p.36-38)

Roles attributed to Planned Communication by Hornik	Function of roles
Low-cost Loudspeaker	Reach large numbers of receivers at a low cost
Institutional Catalyst	Mass communication-based programs can mobilise sectors of society
Political Lightning Rod	Pretend to do something about a problem while not, thus creating an illusion that action has been taken
Organiser and Maintainer	Communication can play a role in maintaining and reinforcing change, e.g. by repeated messages over time
Equalizer	Middle and upper classes innovate more readily and therefore benefit more and more rapidly from messages of planned communication
Accelerator of Interaction	Create possibilities for the receivers to get in contact with sender

The basic concepts of communication theory introduced in this section will be used in the analysis of the empirical data collected to investigate the communication that is taking place and to understand what might influence the situation. As presented earlier, a mixture of communication and other methods has been judged to be necessary in order to solve the problem of encouraging implementation of school gardens in Tårnby Council area, as it is also required that people act on the information supplied to them. The analysis will be presented in chapter 6. In the next section the theory of Situational Analysis will be explained and it's link to communication will be presented.

5.2. SITUATIONAL ANALYSIS & MAPPING

Situational Analysis can both be used to identify relevant actors and their relationships at the start of a project and also to analyse the empirical data gathered during the project. It is a practical tool for making representations of a project. There are no right and wrong answers when carrying out Situational Analysis, as it is a process of following and moving deeper into the empirical data gathered.

The theoretical background of Situational Analysis relates to the postmodern turn and the increasing complexity of the world. Situational analysis can be seen as a tool for dealing with these complexities in specific situations. As described in the section above, communication can also be seen as a system of complex relations and Situational Analysis can assist in gaining an overview of who and what are involved and relevant in the situation of communication.

Many different types of research projects and researchers from different backgrounds can draw on a wide range of research methods in order to create situational maps and analyses. Some of these methods could be through interviews and observations, visual or historic materials (Clarke 2003, p.553).

Adele Clark names 4 areas of explanation to be aware of when carrying out Situational Analysis:

1. The main use of the maps produced is to 'open up' the data in order to carry out a deep analysis. Situational analysis can be used to show researchers 'where and how to enter' and to show what has been found in the data by way of analytical exercises.

2. Situational analyses can be used with coded data but also with non-coded data, as long as the non-coded data is read thoroughly. In some cases the researcher can collect data and then due to various reasons can become unsure as to how to begin the analyses. In these cases situational analyses is an effective way of analysing data as it stimulates thinking and it is especially helpful for novices.
3. It is important to carry out memoing during the process of situational analyses, as a lack of memoing is a major problem in research. New insights into the relations among the elements can be found through this type of analysis and they should be noted down so that they can be remembered for analytical attention later.
4. Adele Clark also believes that there are things researchers suspect are going on in the field that are never mentioned, she calls these 'sites of silence'. She believes that these 'sites of silence' should be articulated in the research and that situational analyses can be used to guide researchers into finding out how these areas can be researched further without putting words into the mouths of the participants. They can also guide the researcher in a systematic way in making decisions about the path to take for future data collection (Clarke 2003, p.560-61).

The three main cartographic approaches to situational analyses are situational maps, social worlds/arenas maps and positional maps (Clarke 2003, p.554). Social worlds/arenas maps deal with groups of people, how they engage in different areans and how meaning within these arenas can meet in social worlds. Positional maps focus on areas such as discourse analysis, positions and power relations. In order to narrow down these perspectives are not included in this thesis. For the purposes of this thesis, only the methods of situational maps will be used, as these are deemed sufficient to open up the empirical data collected. Situational maps show the main actors (human) and actants (non-human), discourses and other elements from the research and from these an analysis of the relationship between/amongst them can be provoked. The focus is on the situation, concentrating on who and what are in the situation, and whether they matter to the situation and also which elements make a difference in the situation (Clarke 2003, p.561). Like Situational Analysis & Mapping, communication theory deals with both actors and actants, in this thesis the communication between actors in the school district will be investigated and the mediums and channels (actants) used to communicate will be included in the analysis.

Messy maps are generally the first types of maps to be made in an analysis. The messy maps show a messy overview of all the elements in the situation. Some are easier to see than others, for example there are also some elements that are invisible but crucial to a situation. The messy map is both a representation of the elements as seen by the participants but also by the researcher/analyst. It is important to have as much as possible portrayed in the messy maps, anything that is later deemed to be of little significance will naturally drop away in the process. The important factor is that everything is represented through the data collection and this is the researchers responsibility to make sure that the data collection methods are extensive enough as to cover these factors (Clarke 2003, p.562-63).

The next step is to make ordered/working versions of the Abstract Situational Maps. Adele Clark offers some examples of categories that can be used to group elements from the messy maps, such as; spatial, temporal, and technological. For example, relating to the communication theory explained in the previous section, spatial elements could be the places in the school where communication occurs, temporal elements could be the fact that the school garden sowing season begins at a certain time of year and does not follow the school year, technological elements could represent the channels and mediums used to communicate information. But at the same time Adele Clark stresses that other categories can make more sense in certain research projects and it is up to the individual researchers to form categories from what makes sense in their research project. The process then continues as a series of trial and error, the researcher has to gauge what feels right/wrong or better/worse and make decisions based on these judgements in order to create the ordered maps. It is all about cutting down and opening up the categories. The other important aspect of this process is to make memos at the end of the session, it is crucial to catalogue why the researcher chose one direction instead of another, or the insights found during the session and any ideas for data that still should be gathered (Clarke 2003, p.563).

The last step is to make the relational analyses. This requires choosing elements and writing down the relations between them. Any element can be chosen as the starting point and then relations between it and the other elements can be drawn up. Every situation will be different according to the element that is chosen as the centre point. This gives varied pictures of the situation, from many different angles, sometimes it makes no sense but at other times it can create deeper analysis of the situation and lead

to creative and alternative thinking (Clarke 2003, p.569).

When carrying out Situational Analysis & Mapping the researcher is always looking at something here and now in a specific situation and therefore, generalisations cannot be made. Historical analyses can be drawn into the analysis and explanations of what has happened before can be drawn on, in order to be incorporated on an analytical level, but the results will look different from situation to situation.

The first two steps of messy maps and ordered maps will be carried out in this thesis; the third step of relational maps will not be carried out. Customer Journey Mapping, (which will be explained in the coming section) is seen as a visual portrayal of the relational maps that Adele Clark utilises. The difference is that Customer Journey Maps are more than an analytical tool as they are also recommended in order to make a change. The Customer Journey Maps also include emotions and attitudes, which give a closer representation of the user needs in the situation. The silent actors and actants that are incorporated in Situational Maps are represented in the back-stage of the Customer Journey Maps, where they also show the relations between the actors in the back-stage and how they can affect the front-stage.

The results of the Situational Maps in this thesis have been gathered and the themes found have been analysed further in order to create a Customer Journey Map, which is explained in more detail in the next section. The resulting Customer Journey Map gives the researchers a deeper and visual understanding of the situation being analysed.

5.3. CUSTOMER JOURNEY MAPPING

The Customer Journey Map will be used to summarise, visualise and structure the findings from the data analysis. Through the development of the Persona and Storyboard presented in the following sections, the Customer Journey Map will be used to show the Personas journey throughout a school year in the context of school gardening.

Customer Journey Mapping is used to gain deeper insight into the users experiences. In the first section about communication theory, various concepts were presented that explained the importance of the communication planner understanding about the perceptions of how others perceive reality in order to gain an empathic approach to the

receivers of a message. This can strengthen the chance of the message succeeding.

Customer Journey Maps are based on ethnographic research such as observation in which the researchers can gain an understanding of the customers' perspectives and emotions whilst encountering a product or service. It is more than a practical depiction of a Customer Journey because touchpoints also show what the journey means to the individual concerned (Brown 2009, p.115, 126-28). Using Personas (described in the next section) in the Customer Journey Mapping makes the map more realistic because the Personas represent the insights gained in the research and is based on the empirical data from real life people. Stakeholders can then use the Customer Journey Mapping to inform management or other employees of the users story, which is based on the users own experiences. Problem areas and opportunities can be identified from the mapping and new initiatives can be constructed that are based on a deeper problem analysis of the users' experiences.

Touchpoints must be identified in order to create a Customer Journey Mapping for the Persona. Touchpoints are areas where the users' interact with the service or product for example; through face-to-face contact, in meetings or use of the Internet. The touchpoints can be identified from the empirical data, through interviews or observations or they can be found from following blogs or users' video diaries (Stickdorn and Schneider 2011, p.158). They are the most meaningful points of a customers' journey. The overall user experience is then constructed using the touchpoints as the centre. The touchpoints will then connect together, and other actors and objects can be brought into the picture. Once the touchpoints are localised, they can be turned into opportunities (Brown 2009, p.126).

The map can be split into front-stage and back-stage instances by the line of visibility; this will give a holistic overview of the system, which is important as the service outcome is more than just the meeting of the end-user with the service or product. Glushko and Tabas argue that:

> *"The service outcome emerges from the service system of back and front stage services that establish the context and satisfy the preconditions for the final service encounter to take place"* (Glushko and Tabas 2009, p.416).

The interaction with the Persona is what is happening front-stage; this is what is visible to the Persona. Other actors & objects that can affect the users decisions or have some sort of impact on the users experiences without the user ever communicating with them can be shown as back-stage instances. Actors & objects can appear both front-stage and back-stage on the map, depending on their role in the touchpoints situation (Glushko and Tabas 2009, 407-427). It is also important to inform why the story develops as it does, what was behind the different parts of the story that is being told. A visual representation of the Personas journey is then created in a way that is easy for the reader to follow, but it must also have a level of detail that provides real insights into the journey that is portrayed (Stickdorn and Schneider 2011, p.158). Emotions and attitudes can be shown at the top of the map. These are the Personas reactions to the various touchpoints that visualise their feelings, perceptions, and frame of mind while they are interacting with a service or product (Martin and Hanington 2012, p.196).

Once the prototype of the map is made, it can be used as a basis for discussion in a group forum. Through discussions and writing up notes and queries from the plenum, alternative ways of working and suggestions for improvement can be made (Martin and Hanington 2012, p.196).

There is some critique in the use of Customer Journey Mapping as a method; if the mapping does not show an accurate visualisation of the users world then it can be more of a hindrance than help. Some instances when the translation from user experience to Customer Journey Mapping can be misinterpreted are:

- In todays techno-oriented world there are many ways to find information, and as a service provider, you cannot always be sure of where the customer will find information about your company. This sometimes can lead to users trusting other sources more that the actual organisation providing a service or product (Fauscette 2013).
- Projection can also be a problem. This happens when employees think that the users have the same needs and experiences as themselves (Fauscette 2013).
- Many organisations still operate in a culture of silo thinking. Each silo has people with different backgrounds and different ways of seeing things and there can be elements of inter-company competition. A Customer Journey Mapping often has to depict a whole organisation, in order to see the customers' full journey; this

can be problematic if different departments cannot work together (Fauscette 2013).

- The word journey often means a pre-defined system, where tasks happen consecutively. But in todays world, it is important to remember that the customer is often flexible and adaptable and the users interaction with the produce or service if often more fluid than rigid (Fauscette 2013).

When all of the is taken into consideration and mapping methods are used in the correct way, Customer Journey Mapping can be a powerful tool for creating evidence based solutions.

In the following sections, the methods of creating a Persona and Storyboard will now be presented.

5.4. PERSONA

A Persona is a character that represents a certain group based on their shared interests, which clients and designers can engage with (Stickdorn and Schneider 2011, p.178). The Persona is a fictive user, used to ensure keeping a people-centred focus in the development of a product or service (Grudin and Pruitt 2002, p.146; Stickdorn and Schneider 2011, p.244). It is a way to introduce a user perspective, where user needs are explored (Stickdorn and Schneider 2011, p.140).

The traditional "user-centred" approaches have several flaws, including designers and users not being truly engaged; social & political aspects are left out; and complexity and representativeness are hard to identify and portray. If the Persona is used properly and in combination with other methods, the technique can make up for these shortcomings (Grudin and Pruitt 2002, p.144). The Persona offers the possibility to define and engage different interest groups within the target of the service or product. They can help focus on wants and needs of real people, instead of abstract demographics that do not tell much about how people act (Stickdorn and Schneider 2011, p.178). This thesis is not directly dealing with a service or product. The Persona is used, as a way of focusing on one person and their specific needs, motivations and desires in a specific context, in order to analyse how and where she receives and passes on information in relation to the Working Group. Part of the Working Group's tasks is to support the schools in the district in implementation and continuity of school gardens. For the sake of the thesis it

is not the service that is the focus of the analysis but the communication around the service provided by the Working Group.

In order to be able to design from a user-centred approach you need to get to understand people. The risk of trying to design for everyone however will result in untargeted solutions. Despite being fictive, Personas build on data collected from field research, involving real users is valuable in order to develop representatives that are reliable and depict common behaviour patterns (Martin and Hanington 2012, p.132). Although Personas are fictional, they represent motivations, reactions and behaviours of real people, thereby providing feedback on the real life experiences and perceptions of the given product or service (Stickdorn and Schneider 2011, p.178). Shadowing, interviews, workshops and observations are methods usually applied to collect data for building the Persona (Stickdorn and Schneider 2011, p.178). These methods are very similar to the methods presented in Chapter 4 used in order to collect data to carry out Situational Analysis & Mapping. Due to the user-centric approach of this thesis communication theory is also applied through a qualitative context.

From the data collected, behaviour patterns and themes are identified, and similarities across users are gathered and turned into groupings of common interest among the target group in order to develop a character (Martin and Hanington 2012, p.132; Stickdorn and Schneider 2011, p.178-79). The Persona in this research is based on empirical data and thus avoids stereotyping, and instead creates archetypes based on behaviour patterns, leading to emphatic understanding and sympathetic insight in the user group's goals and opinions.

It is recommended to keep the number of Personas for a given product or service between three to five. This way it is possible to avoid extreme outliers and still being able to have a focus for the design (Martin and Hanington 2012, p.132). In general, the Persona is kept to a page-length or shorter description, which includes name, photo, ethnicity, educational achievements, socioeconomic status, habits, needs, desires and goals related to this design focus, as well as information about lifestyle including spaces, objects and activities. Creating a Persona includes the user's personal and job situation in the present situation, as well as future goals, ambitions, needs and wants. It can be a combination of text, pictures and diagrams; visual representations, stories and descriptions are used to make the Persona come alive (Grudin and Pruitt 2002, p.146;

Martin and Hanington 2012, p.132; Stickdorn and Schneider 2011, p.178, 226). Some examples of Personas can be seen below in figure 5.4.

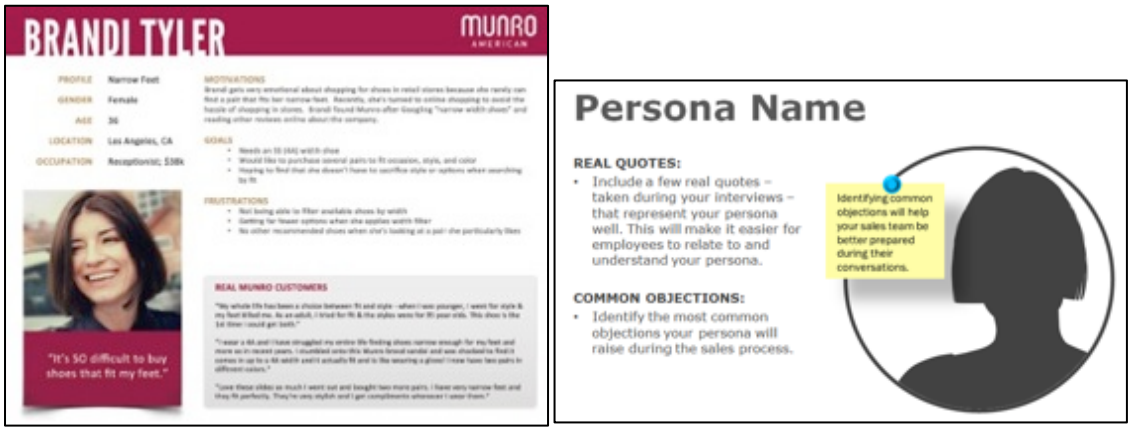


Figure 5.4: Examples of Personas

The Persona is used throughout the whole design process, from developing and discussing to idea generating, prototyping, checking scenarios and envisioning the behaviour of the people the Persona represents in new situations. Furthermore, Personas are useful when communicating collected data, ideas and solutions to clients or others (Grudin and Pruitt 2002, p.146-47; Martin and Hanington 2012, p.132).

Personas create the foundation for a further development process, for example, to build Scenarios, Blueprints or Customer Journey Maps on (Grudin and Pruitt 2002, p.146; Stickdorn and Schneider 2011, p.158, 184).

Characters in popular soap operas and comedy- and dramatic series might look better and have other above average features, but still people identify with them. Further, these characters are moderately complex, as caricature is not necessary, since they are observed and followed over time. The same goes for Personas, that are evolving to reflect empirical data collected from real people; shocking and caricaturing is not needed (Grudin and Pruitt 2002, p.147).

Once the Persona is developed and agreed on within a product or service team, team members can create seperate, meaningful and complementary scenarios around the Persona, related to different areas of the product or service (Grudin and Pruitt 2002, p.147).

Although Personas are a useful tool, one should be aware not to overuse them, thereby risking for example, replacing other user-centred methods, on going data collection and evaluation. Furthermore, it is important to pay attention to the fact that Personas with different traits might be needed for different purposes and reusing a Persona can be a disadvantage; e.g. in relation to product development marketing focus on buyer behaviour and customers, whereas product development is interested in end-users (Grudin and Pruitt 2002, p.150).

In the next section the concept of the Storyboard will be presented. A Storyboard can be used as an extension of a Persona, to emphasise the Personas story, for example portraying situations that include their motivations, frustrations, desirtes and needs.

5.5. STORYBOARD

A Storyboard is a series of drawings, illustrations or pictures of events or situations that are put together in a narrative sequence telling a story about the situation of interest, potentially supplemented by text when this describes the concept or idea more clearly than graphics. Text is often kept to single words, thought balloons or signs. Storyboards can aid capturing and visually depicting important social, environmental and technical factors shaping the context of how, where and why people engage with a product, service or space (Martin and Hanington 2012, p.170; Stickdorn and Schneider 2011, p.186). In the case of this research the Storyboard will show representations of communication touchpoints that actors interact with in a school setting.

A Storyboard is a way to gain insight into the experience of a user and can be used to provoke meaningful analysis, initiate discussion about problems and opportunities, build empathy for end users, indicate important touchpoints, develop ideas and communicate findings or solutions on user experiences (Martin and Hanington 2012, p.170; Stickdorn and Schneider 2011, p.186-89).

It can be used both to describe things as they are as well as picturing how it could be. There is no one way to make a Storyboard, but most commonly it takes on a comic-strip format. An example of a Storyboard is shown in figure 5.5. The Storyboard is supposed to be able to stand alone, so that people viewing it easily grasp the point of the story without long introductions. This means that the number of contextual details need to be enough to paint the picture, but at the same time are not so detailed that meaning is

lost. A Storyboard can tell a story about scenarios taking place in real life or imagined ones (Martin and Hanington 2012, p.170; Stickdorn and Schneider 2011, p.186-89).

Figure 5.5: Example of a Storyboard (Frederiksen and Jessen-Klixbüll, Design exam 2014)

6. EXTRACTING THE DATA, ANALYSIS AND RESULTS

In this chapter the empirical data will be analysed by applying the Theoretical Framework described in chapter 5 and the findings from the analysis will be presented.

6.1. SITUATIONAL ANALYSIS

As explained in section 5.2, Situational Analysis & Mapping was used to open up the empirical data gathered. The transcriptions from the interviews were read through one at a time and more than once by both researchers independently. The extraction and analysis of the data began by using Adele Clarks' elements of actors, actants and discourses, combined with the themes of emotions and attitudes from Customer Journey Mapping. The themes of actors, actants/objects overlap and are common to both theories. Challenges, opportunities and communication situations, mediums and channels were also identified whilst going through the transcriptions. All the above themes were driven by the research questions. In figure 5.6, the colour coding of the themes and the extraction of the data from the analysis of the first interview with T1, can be seen.

The difference between emotions and attitudes were defined as follows in order to make it clearer when finding one or the other in the analysis:

Emotions: are often the driving forces behind positive and negative motivation. Positive and negative experiences are associated with particular patterns of psychological activity. Emotions are subjective, conscious experiences (Atkinson and Tomley 2012, p.324; Wikipedia 2014b).

Attitudes: expression of favour or disfavour towards a person, place, thing or event. They influence people's emotions and behaviour (BusinessDictionary.com 2014; Wikipedia 2014).

The themes were then highlighted in the transcriptions in the relevant colours that represent them, shown in figure 6.1.

- Actors
- Objects / Actant
- Discourses
- Emotions
- Attitudes
- Challenges
- Opportunities
- Communication

Figure 6.1: Coloured themes used for coding data

The researchers then worked together to go through what had been highlighted, compared their results and wrote them onto post-its whilst still keeping the colour codes. The time from the date-stamp on the transcriptions was written onto the post-its along with the code for the person interviewed, so that the comments could be traced back to the correct place in an interview and it would be easier to find relevant quotations further on in the analysis if required. Memos were written on the back of the post-its when relevant points arose from the discussion between the researchers. Memos were both text explaining the point of the post-it, questions that arose relating to other interviews or from within the specific interview being analysed.

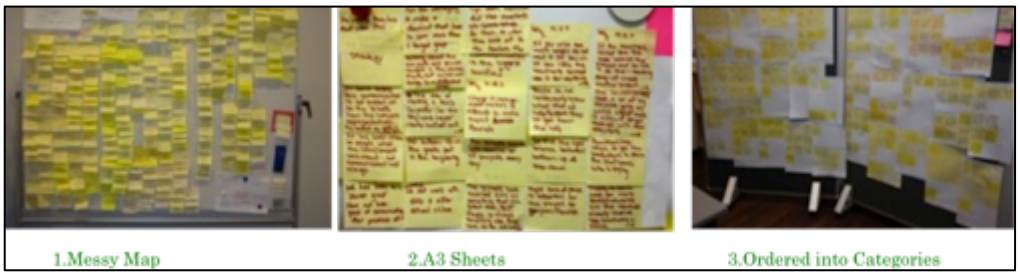


Figure 6.2: Situational Analysis & Mapping - Making Messy & Ordered Maps

The first step explained above resulted in a messy map, which can be seen in figure 6.2, picture.1. The post-its were then ordered according to categories suggested by Adele Clark such as, collective human elements and silent/implicated actors, as presented in section 5.2 and for examples see appendix E. Through ordering the maps in this way, new categories appeared such as, issues related to "the teaching", "communication

methods", "gardening stuff" and so on. Some post-it's were merged if the content was deemed to be very similar or represented twice. The result was many A3 sheets, ordered into categories, see figure 6.2, pictures 2 & 3.

Through working with the ordered maps presented above, certain patterns began to emerge, and the researchers grouped the themes of attitudes, emotions, discourses, opportunities, challenges and communication onto a big map and found links between them, as well as patterns of likeness and contradictory statements, see figure 6.3.

Figure 6.3: Finding patterns of likeness & contradictions

The ordered maps for the actors and objects were not deemed necessary at this stage, as they were also represented in many of the post-its related to the themes above. For example, the communication post-its included details about who communicated with whom and through which channels and mediums. From organising the themes into the ordered maps, seven common categories emerged from this work as follows:

- STRUCTURE/LEVELS
- WORKING GROUP
- CO-OPERATE & NETWORK & WORK ALONE
- TEACHERS BUSY & WORKING ENVIRONMENT
- JUMP INTO IT & COMMITMENT
- INTER DISCIPLINARY
- TEACHING ENVIRONMENT FOR KIDS

All of the above was a process of experimentation to try out ideas for combining methods that led to a better understanding of the data. The learning from the process

of analysing the empirical data from T1 was then used to analyse the remaining interviews and observation notes. The analysis of T1 was a very time consuming experience and adjustments were made for the data analysis that followed in order to optimise the process. For example, the researchers worked side by side whilst reading a paragraph of the interview and then colour coded it and wrote the post-its straight away instead of reading through the whole transcription and then discussing it all in one go.

In the interviews and working group observation notes that followed, the post-its were arranged directly onto A3 sheets and ordered according to the original colour coding themes, thereby skipping the step of making the ordered maps using Adele Clarks categories and instead using the seven emerging categories presented above. As the researchers worked through the remaining interviews and observations more categories emerged:

- PASSION AND COMMITMENT
- TELLING THE GOOD STORY
- CONTINUITY
- NEW SCHOOL REFORM
- POSITIVE AND NEGATIVES ABOUT HAVER TIL MAVER
- STARTING UP HAVER TIL MAVER IN TÅRNBY

As the researchers were working, the procedures used and points of interest found were noted as before in memos (Bryman 2004, p.405; Clarke 2005, p.84).

During the process of Situational Mapping, who and what matters in the situation and new emerging insights into the relations amongst the elements (Clarke 2003, p.561) were elicited in order to find clues to important elements of focus in the the next step of converting these findings in order to structure the further work in developing the Persona, Storyboard and Customer Journey Map.

6.2. PERSONA

From the data collected it could be seen that the teachers differed in the ways they experienced working with the school gardens, their level of success and their degree of support they felt was required in order for them to work in the garden. From systematically analysing the data it became evident that one of the teachers (T1) faced more challenges in trying to implement the school garden and expressed a need for

more support from the working group. Due to these factors this teacher was considered to be a major representative for the highest priority segment (Grudin and Pruitt 2002, p.148) and became the basis for creating the Persona. The ordered map from T1 was then analysed in order to extract relevant details to develop the Persona under the following headings that were major points of interest:

- PERSONAL DETAILS – NAME, AGE, DEMOGRAPHICS, FAMILY LIFE, WORKING LIFE
- CULTURE IN TÅRNBY
- MOTIVATIONS
- DESIRES AND NEEDS
- PREFERENCES & LIKES IN THE SITUATION
- OBJECTIVES & GOALS
- FRUSTRATIONS AND CHALLENGES

The headings above were found from researching how other Personas had been presented in the IFS coursework (Tvedebrink 2013) and from the theory presented about Personas in section 5.4, an example of a Persona is also shown in this section. It was found that creating a Persona includes for example needs, desires and habits of the person so that the Persona becomes a real person. In order to begin forming the Persona and developing a relationship to her, a photo was found, she was given a name, Solvej Støvring and her personal details were filled out by hand on a big piece of paper (see figure 6.4, picture 1). Solvej is based on the data collected and therefore is a female, due to the fact that all the teachers interviewed were female. Once T1 had been analysed and major points of interest had been written onto the paper under the relevant heading from those presented above, the other teachers' interviews were gone through in the same way.

1. Big piece of paper

2.Communication touchpoints

Figure 6.4: Creating a Persona

The relevant points of interest from the remaining interviews were taken from the post-its and merged onto the big sheet when they emphasised, complimented or supplemented something that T1 had commented on. In order to find motivations, reactions and behaviours that represent real people based on the empirical data collected, (Martin and Hanington 2012, p.132; Stickdorn and Schneider 2011, p.178-79) traits that the teachers interviewed had in common such as being busy, creating more community around the garden, and enjoying seeing the children learning through their work in the garden were found. Although the teachers had traits and experiences in common, they did not always experience them in the same way. For example, T1 had a lack of communication with her school management around the school garden while other teachers had a more positive relationship to the management arounbd the school gardens. The support shown by other managers was used as inspiration as a way to motivate Solvej. All teachers pointed out the problems that arise in mainstream schools due to the way the timetable is structured, this makes it difficult to work in a school garden for more than 2 periods at a time. All the sections on the big piece of paper were then transferred into a digital version (see figure 6.5) and combined with the elements that are explained below.

A diagram of the communication touchpoints (see figure 6.4, picture 2) was also created from studying the data extracted from the interviews and analysing the observations made. These touchpoints were common to all the teachers' interviews and are the main communication channels used in the schools. To make Solvej more lifelike, a quote from an interview was also added, along with a real life picture of someone not related to the research interviews.

Solvej's personal key attributes in relation to her competencies and attitude to working in the school garden were put into a table at the bottom of the page. These attributes were based on what had been learned from all the teachers' interviews and the State of the Art in relation to the real life competencies and attitudes of teachers and their level of success in school gardens. The higher the rating the better is the teacher's chances of success in implementing the school garden. The rating of the key attributes was judged by the researchers from what was learned from T1 and this teacher's level of success. Solvej can be seen in figure 6.5 below.

The reason for creating Solvej was to have a real life character that represents and assists the researchers in constraining the data. As described in section 5.4, the Persona is used to aid in providing targeted solutions to a problem. In creating Solvej, her motivations, reactions and behaviours are now defined and an even deeper understanding of these concepts can be understood by developing a Storyboard.

Solvej Støvring

I'd love to work more in a school garden with my class, but I can't do it alone.

DANISH
FEMALE
39 YEARS OLD

Solvej is married with 2 children aged 6 & 9. Solvej lives with her family in Dragør, in a detached house. In her spare time she likes to work in the garden, where the family grows a small amount of fruit and vegetables. She also enjoys outdoor activities with her family.

Solvej graduated from teacher training college in 2001 and now teaches middle-stage school in Tårnby. She teaches maths, science and home economics and is very passionate about all her subjects.

Desires & Needs

- More: time, funds, support, knowledge
- More community around the school garden project & wishes she had more colleagues involved, both from the school & the council area. Also that the local council school garden working group take more initiative to establish contact with her.
- A solution that is tailored to her needs, so she does not have to spend time figuring it out herself.

Motivations & Goals

Solvej likes it when her boss, colleagues & the parents of her pupils, show an interest in her efforts.

She is particularly happy when she can see the link between her subjects & the projects she takes on & she can judge what a new project will demand of her.

When working with the pupils in the garden she is delighted to experience pupils having fun, being engaged, physically active and learning.

Frustrations

- As a teacher she is very busy. Does not always have time to engage in everything that interests her.
- Lack of structural support from higher levels.
  - Time, money, people, courses
  - School day structure
- School Reform is a big worry, as the future is uncertain at the moment.
- Felt like her school garden had failed due to lack of produce and lack of time to prioritise.

Key Attributes

Knowledge of support available	★★
General gardening skills	★★★
School gardening experience	★★
Willigness to try	★★★★

Likes to solve problems on her own & asking for help does not come easy to her.

Figure 6.5: Persona -Solvej Støvring

6.3. STORYBOARD

Figure 6.6: Creating a Storyboard

As mentioned earlier, as part of the data collection, following a teacher around the school was carried out in order to map the school and the communication touchpoints in the school. During the mapping instruments such as, cameras were used to record what the researchers saw on their way around the school, examples are seen in picture 1, figure 6.6. The photos taken were later grouped together according to their placement in the school. For example, all the photos from the school library were grouped into one photo. An example of the result of this mapping can be seen in picture 2, figure 6.6.

As presented in section 5.5, a storyboard can be used to gain insight into user experiences, provoke analysis and initiate discussion (Martin and Hanington 2012, p.170; Stickdorn and Schneider 2011, p.186-89). A Storyboard based on the researchers experiences and the photos taken during the mapping was developed in order to understand Solvej and how she moves around the school. This enabled the researchers to see where and how she interacts, in order to gain more insight into her daily life in the school and to discover how she perceives the communication touchpoints.

The communication touchpoints portrayed in the Storyboard were found from the data that had already been extracted from the interviews, observation notes, pictures taken in the Touchstone Tour and the communication diagram explained in the above Persona section. As explained in the theory, Storyboards can be used to aid capturing and depicting important social, environmental and technical factors tha shape the context of how, where and why people engage with a space (Martin and Hanington

2012, p.170; Stickdorn and Schneider 2011, p.186). In this situation, the social is whom Solvej communicates with, the environmental is where she communicates and the technical is the channels and mediums where she receives or sends information. An initial rough outline of the story was written on a piece of paper, as seen in picture 3, figure 6.6, later it was digitalised and the story was visualised adding pictures from the school, figures and text bubbles to portray Solvej and what she is thinking and saying along her journey. The full Storyboad can be seen in figure 6.7.

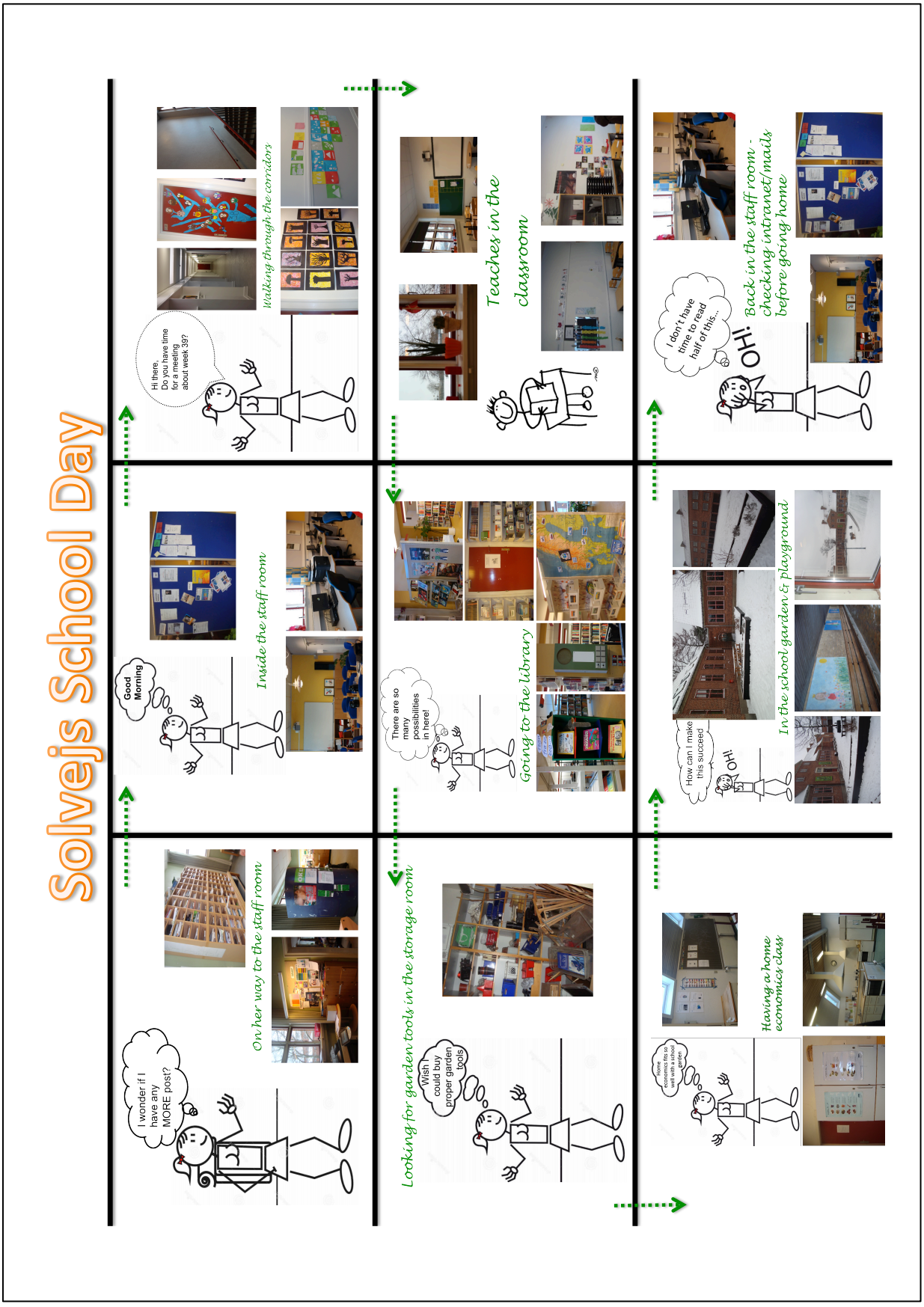


Figure 6.7: Solvejs school day

Solvejs School Day

The following text relates to the Storyboard that can be seen in figure 6.7, a full pullout version of the Storyboard can also be found at the back of the thesis. Quotations from the situations described by the interviewees that are visualised in Solvejs story will be included in the section 6.5, in the data analysis – What Does it Tell Us?

Solvej's day begins on her arrival to school, where she visits the staffroom and is already bombarded with information before she even enters the room. This was the impression the researchers also had when entering the staffroom.

Once inside the staffroom she again goes past some notice boards and also has the opportunity to check emails and information on the computer and she can talk to colleagues.

While walking through the corridors on her way to the classroom she can see exhibitions of the pupils work from different classes. Solvej enjoys seeing these exhibitions and being inspired by other teachers and their class work. Solvej also uses small exhibitions herself to communicate to others what her class has worked on, the children get so proud when they see their work in the corridor. Solvej also meets another colleague in the corridor and asks if she has time to meet and discuss another project that they work on together.

Solvej then enters the classroom and sees all the pupils' work hanging on the walls. There is some work that another teacher has put on the wall and Solvej is frustrated because it is not hanging tidily and it disturbs her work environment.

Solvej then goes to the library with her class. Solvej loves the library because it is full of opportunities for communicating both samples of what the pupils are working on, but also is a way for her to be inspired through the information available about how she could work with certain topics. In the library Solvej has access to books, games, maps, music, films and a speaker system that can be heard throughout the school.

After teaching Solvej goes to the storage room to check on the tools they have for working in the garden. Here she can see that they do not have many tools left and wishes that somehow she could find the resources to obtain new tools.

Solvej then teaches a home economics class and she dreams of producing enough produce to use in the classes. Home economics is one of her passions and she can really see the connection between this subject and her other subjects of science and maths.

On her way back to the staff room after class, Solvej goes past the school garden. It is soon spring and the school garden season will be starting up again soon. Solvej feels a bit frustrated, as her previous school garden did not yield many products and there were many issues in terms of the time she had allocated to working in it and the resources that were available to her. Solvej really loves the idea of working in a school garden and still has a degree of motivation for carrying on but she feels alone and requires some assistance.

Solvej then returns to the staff room and has received many new messages on the intranet and in emails since this morning. Solvej feels lots of pressure in terms of the time she has to deal with these communications.

By re-creating Solvej's journey through the school day a deeper understanding of her problems and experiences can be reached.

Solvej will now be used in the following Customer Journey Map to shape how, where and why the research participants engage with the Working Group around the topic of implementing school gardens. As described in section 5.3, the Customer Journey Map is a way of presenting this complex world in a more understandable form in order to work with the topic and develop suggestions as to how the Working Group's strategies can be improved.

6.4. CUSTOMER JOURNEY MAPPING

Figure 6.8: Creating a Customer Journey Map

A description of how the Customer Journey Map was developed will now follow. A full pullout version of the Customer Journey Map and a key describing the meanings of the icons and colour coding on the Customer Journey Map can be found at the back of the thesis.

To start with a frame for the Customer Journey Map was made on a big piece of paper. See figure 6.8. The map was divided into front-stage and back-stage. In the front-stage a line symbolising Solvej's journey was drawn. Above this line, space for adding Solvej's emotions and attitudes was made and below the line space was made for adding actors and objects related to the touchpoint. At the back-stage, space was made for filling in actors and objects. At the very bottom, a row with discourses was added.

The Customer Journey Map shows a calendar year in the life of the Persona, Solvej. During the year Solvej is experiencing different meetings, and work tasks called touchpoints that can be both positive and negative and relate to her work with the school garden. The touchpoints and the conversations resulting from them, deal with the challenges and opportunities to implementing and working in a school garden as described by the participants in the data collection and found through the analysis of this data. Due to the focus on communication in this thesis, the objects represented in the map are mainly communication channels and mediums that have been mentioned in the data collected. Through the data analysis, some instances of a lack of communication have been revealed and these are also visualised on the map.

The touchpoints are indicated in the Customer Journey Map as either a full purple circle or a dotted purple circle depending on whether Solvej is present in the situation or not, respectively. Some of the touchpoints relate directly to the month where they occur and others are placed randomly on the map according to what was deemed appropriate according to the visualisation of the map but also how they connect to the touchpoints around them. For example, the touchpoint called **Network Meeting** is a fictional touchpoint that does not exist in the council area at the moment; it was an idea that appeared repeatedly in the empirical data collection, whereas the **Harvest Festival** and the **Kick Off Day** are specific yearly events that the Working Group organise. There are four main groups of actors that are represented in the speech bubbles from the data collection and analysis, Solvej is purple, School Management are blue, Teachers are green and representatives from the working group are orange. The speech bubbles show conversations between the different actors, for example if there is more than one blue bubble, each bubble represents a different view of actors from the School Management group. These views have been found through the data analysis.

In order to fill in the Customer Journey Map, the ordered map (See figure 6.3) from the interview with T1 was gone through, whilst at the same time bearing in mind what had been discovered from the other interviews and observations. The researchers systematically worked their way through the map by taking one vertical row at a time and adding points to the Customer Journey Map. Firstly, key touchpoints were identified, and secondly, actors, objects, emotions and attitudes related to that situation were added. In some cases, a point from the colour-coded themes (seen in figure 6.1) was identified first for example an emotion or attitude, and a touchpoint was connected afterwards. The opportunities were integrated into the map as ideas in the form of light bulbs and the challenges were included in the quotes and statements or turned around and made into ideas.

The development of the Customer Journey Map was an on-going process, going back and forth between the Customer Journey Map and the ordered maps produced during the previous part of the analysis. During this process, the memos made during the previous analysis aided the recollection of relations, patterns and connections between the different interviews and touchpoint situations. While the Customer Journey Map was created new memos were made, to keep track of decisions made.

The remaining interviews and observation notes were then gone through one by one, and relevant points were either added to existing touchpoints or new touchpoints were made. These points were added to both the front-stage and the back-stage of the Customer Journey Map according to their relevance in the situation.

Solvej is involved directly in the front-stage situations while the back-stage are situations that are happening without Solvej but they can affect her daily work in some way or another. Actors and objects that are shown front-stage are the people and actants that Solvej actually meets along her journey, the ones represented back-stage are the cases where the actors and objects affect the situation but Solvej never meets them. Throughout the journey actors can appear in both front-stage and back-stage areas according to how they interact with Solvej. As described in section 5.4 and 6.2, emotions and attitudes are important elements of a Persona. Since Solvej is the central Persona in the Customer Journey Map, it is her emotions and attitudes that are at the top of the map. The other actors emotions and attitudes are shown back-stage, both in the speech bubbles and in written text at the bottom of the map. Generally all speech bubbles portray some sort of emotion or attitude and they are the essence of quotes extracted from the empirical data collected.

At the bottom of the Customer Journey Map, the main discourses found throughout the empirical data collection and analysis is shown. These were found to be discourses that run throughout the whole journey for all the actors in the council area, both front-stage and back-stage and are not connected to specific touchpoints. Some of the discourses describe what it is like to work in Tårnby Council area.

6.5. WHAT DOES IT TELL US?

As described earlier in chapter 6.4, the Customer Journey Map along with the findings from the interviews, observations, Situational Analysis & Mapping, Persona and Storyboard were used for the empirical data collection and in order to extract the data for analysis. The findings from the above mentioned data extractions are now going to be analysed in the following section.

From the touchpoints and generally on the Customer Journey Map it can be seen that during the school year lots of meetings are going on in the council area relating to the schools. Meetings occur at different levels involving both different actors from the same

groups, for example the **Management Group Meeting**. Then also between groups for example the **Science Group Meeting** that involves teachers, managers, and representatives from the councils' nature school and from the pedagogical development centre. This could be an area of great potential for knowledge sharing within and across different professional groups and will be elaborated in this chapter.

People in the council area are generally very busy and receive lots of information both virtually and physically every day. There are also many tools for communication that are present in the Customer Journey Map. Due to this it can be seen that there is a lot of communication happening in the area. At the same time the presence of so many light bulbs ideas and the examples of broken lines of communication show that there is also room for improvement and that there might be better ways to communicate.

Descision Making and Communication

An overall impression from the Customer Journey Map is that many things are going on back-stage. However, a lot of what is going on back-stage can still influence the front-stage (Glushko and Tabas 2009). Even though the management does not appear front-stage, they still have lots of opinions at the back-stage, which do not come to light at the front-stage very often. Much of what the management are discussing back-stage in the Customer Journey Map comes from managers who are not part of Solvej's school. For example, at the Harvest Festival there is a manager that Solvej never meets who is talking about his positive experiences from the festival and his belief that this is the way forward for school gardens. Two criteria of how to define whether a problem is a communication problem were presented in the Theoretical Framework in chapter 5. This example shows a situation where a lack of communication is the problem (Windahl, Signitzer, and Olson 1997, p.30). As it was seen in the Persona information sheet, in (figure 6.5), a motivation for Solvej is when others show an interest in her work. This lack of communication directly from the management in Solvejs' school can be part of the negative experience for her and her feeling of being very alone in the project. More involvement from the management's side is a way to solve this problem through communication (Windahl, Signitzer, and Olson 1997, p.30, 54-58) by increasing motivation and decreasing the feeling of being the only person interested in the school garden.

In **Prepare to Set up a School Garden**, Solvej expresses a feeling of frustration over the fact that the plant boxes that are now used for the school garden were set up before any teachers became involved. She thinks it would have been beneficial if more people had been involved in the creation of the school garden from the beginning and the location of the school garden had been more thoroughly considered. It can also be seen in the Storyboard, in section 6.3 that Solvej visits the garden in the school playground and thinks about how she can make it succeed. Back-stage in the Customer Journey Map under **In the garden with pupils,** a situation can be seen where the pupils are tramping on the garden because it is placed in the school playground. This is an example of the negative consequences of descisions being made without consulting the people who will actually use the solutions (Windahl, Signitzer, and Olson 2009, p.54-58).

Like Solvej one of the teachers interviewed wishes that she had been involved more in the implementation of the garden. The placement of the garden and the initial contents were not discussed with the science teachers before it was established and this has led to a lack of ownership amongst the teachers. It also created a problem because the garden was in the same place as the pupils played that resulted in crops being trampled on. This is reflected in the following quotation from an interviewee:

T1: (00:37:26-5)

"... But it was as you said, that something was forced upon us, which does not really work eh. (...) And in a school playground, you cannot set up small sprouting plants because the pupils play football and tramp over them. (...) If it is to be set up in a school playground, then we need to talk about some huge bushes, (...) so they cannot run and tramp them down in 2 seconds. I had an idea that we could have them in the plant boxes down here, but no (...) It was a bit hard to figure out what could be removed and could not be removed (....)"

The above text can be related to the communication theory presented in section 5.1, where a table was presented that shows how the definition of the communication problem and solutions can affect the motivation and success of the message depending on who sets them (Windahl, Signitzer, and Olson 2009, p.54-58). When the problem and solution is defined from outside the system, in this case by the school management, then the receiver (the teacher) is not easily motivated to work with the solution. This is

also an example of a linear, one-way communication model which is a top down approach to communication, and has left the teacher feeling a lack of ownership and inclusion in the process (Windahl, Signitzer, and Olson 2009, p.12-15). Involving the users in the development process enhances the chances of the initiative being more positively received and thus being used and incorporated into their daily lives (Mootee 2013, p.32-35; Stickdorn and Schneider 2011, p.35-51)

This feeling was not shared by some of the interviewees, who revealed examples of positive relationships between management and teachers in terms of their work in the school gardens. In the state of the art an importance of the support from the school management was stressed for the implementation and success of school gardens (Blair 2009; Hazzard et al. 2011; Ozer 2007). This can also be seen in the data collected:

One Assistant Head Teacher in an interview refers to the schools involvement in a development group in which he has shown the pupils work to others:

M1: (0:35:17.8)

"… I always ask if I can borrow the posters the personnel have made and the material the personnel had made in order to present it to the development group, that is (…) how we have been able to acknowledge the work they have done. But otherwise things like that take place during on-going dialogue and when you try to find time to be curious about what they are working on"

The working group coordinator as well states that, at the schools in the council where the school garden projects are going well, the management back it up, which also make her work easier.

WG1: (0:08:42.4)

"There are especially two schools (…) that have taken it in, and where it is the management that have also said 'this is something we want, this we will do', and they have also approached and asked for details, and how can we put it together and like do something. So there I think, where the management go in and say 'this is something that defines my school', that is where something happens. And there it has got a life on its own too, right. There it is not me who has to get the ball rolling, there something happens by itself (…)"

A teacher from one of the schools working with school gardens emphasises this in the following quote:

T3: (00:24:30-5)

"… I actually think it has seemed like our hands were free (to do what we like), in this place, I mean from the management I think there has just been good communication, good interest for it and lots of space if you came and said now we would like to do like this (…) praise and recognition for what we have done, that is, which has just been full of support…"

The quotations above that represent more positive teacher-management relationships, are examples of communication based on mutuality and shared perceptions constructing solutions through on-going dialogue (Windahl, Signitzer, and Olson 2009, p.12-15). Thereby creating solutions that have a higher chance of fulfilling the needs of both parties.

There are three touchpoints in which actors are involved in the back-stage, that relate to management support. At the **Science Group Meeting**, one manager is expressing how he has supported the Haver til Maver project by prioritising time and money. **In the Garden with Pupils**, a manager talks about how he goes by the garden to show his support of the project. In the **School Management Meeting**, one manager is showing other managers what some pupils have produced in relation to their work in the garden.

At the start of this chapter it was described how meetings in the council area occur at different levels involving different actors that represent their own schools or groups. These meeting situations are also portrayed throughout the Customer Journey Map. For example, the school management from all the schools in the council hold meetings together, as seen in the first touchpoint **School Management Meeting**. In the Theoretical Framework in chapter 5, the concepts of target population and receiver group were presented. Strategy two in figure 5.2 shows that when actors are sent to meetings in order to represent their specific group then the receiver group is found from inside the target population (Windahl, Signitzer, and Olson 2009, p.18-22). This concept describes that what the participants choose to focus on during and after the meeting can influence what they decide to take back to their own school and diffuse to other actors. This choice of focus can be very subjective according to the participant's

attention and motivation to what is being communicated and discussed at these meetings; users and gratifications theory is about the individual linking the communication to their own needs and fulfilment (Windahl, Signitzer, and Olson 1997, p.104). Taking this a step further, the researchers of this thesis argue that at the **School Management Meeting** the managers will also be considering their employees needs and interpreting what is acceptable and relevant to bring back to the school from both their own and their employees point of view. A situation of selectively deciding what information to pass on can be seen in the **Science Group Meeting** where Solvej forgets to pass on information from the meeting she attended. A similar situation was seen in the interview with WG1:

WG1: (0:04:16.3)

"...I have one from each school represented in the network and then I can unfold something and then they can take it to their subject teams etc., right (…) Some are really good at going back to their schools and for some it stops with, with some pamphlet left in the bag, that is probably how it is with everything..."

It can be argued that when the management make an active descision to support a project, then their motivation will be higher at meetings where relevant information is passed on and in turn the management will be more likely to pass this information on to their teachers who work with the project. This is reflected in the following statement concerning the amount of project proposals a school receives. According to an interviewee the projects tend to be more successful when Management makes a decision about which projects are chosen:

WG1: (0:09:27.2)

"Yes, that is very central, I also think it is a general thing for projects in the public schools (...) And the cases where the management says 'yes, we bike to school, that is what we do, we do it properly, who is coordinator in the phases, who does what at which grade level', boom then things are happening"

In the above section the importance of management support to teachers when implementing and working with a school garden can be seen. The Customer Journey Map showed a lack of management support for Solvej in the front-stage, and a lot of management activity back-stage. The support that is visible from the statements above

and in the Customer Journey Map relates to various aspects of school garden work. The level and the type of communication between management and teachers were also seen as an important issue that can affect the teachers work both positively and negatively.

Looking at descision making at a political level it could be seen that Tårnby Council have many policies within the school area that could be linked to the school garden projects more clearly (Tårnby Council 2014a; Tårnby Council 2014b; Wøhlk 2011). In the State of the Art, the four areas relevant to school gardens in relation to their impact on children were presented as: food literacy and food courage, increased physical activity, strengthening social and academic competencies and closer to nature. The three Council policies can be linked to the four areas in the following ways. The Councils focus on health can be linked to the increased physical activity (Mygind 2007) and a focus on food literacy and food courage while working in the garden which can increase knowledge of fruit and vegetables and also intake (Parmer et al. 2009; Ratcliffe et al. 2011; Wistoft et al. 2011). The Councils focus on Inclusion can be linked to the strengthening of the pupils social competencies, as it has been shown through the State of the Art that school gardens can aid wellbeing and cohesion in school classes (Blair 2009; Maller 2009; Mygind 2009). Lastly the Councils Science Strategy can be linked to the idea of children getting closer to nature while in the school gardens. The Science Strategy has a focus on:

¨*...teaching children to forumulate their positions in the challenges of society...*" (Wøhlk 2011, p. iv).

These policies are shown in various areas of the Customer Journey Map as Official Documents: Tårnby Inclusion Strategy, Tårnby Science Strategy and Tårnby Health Policy. In the touchpoint where Solvej **Meets WG1** she is told about the links from strategies to school gardens through the topics of inclusion, food and nature. In the interviews WG1 talks about the fact that the school garden project links all these strategies together and therefore there should be more focus on the project.

WG1: (0:23:48.9)

"… In Tårnby we have an action plan for science, an inclusion strategy, we have a health policy (…). Here we got a project (Haver til Maver) that actually says 'well, you should do

like this, you should do like this, you should do like this', right."

These three policies are closely linked to the school garden concept and also to the school reform (The Danish Ministry of Education 2012; The Danish Ministry of Education 2013), in that it also tackles inclusion and offers more physical activity. This link is clear to one of the interviewees but it might not be so clear for other Council employees and the other interviewees. If these policies are used more in the arguments for school gardens being relevant in the Council area and linked together more then it could be a stronger argument for School Management and Teachers to implement them, therefore this can also be seen in the Customer Journey Map as objects back-stage in the **Working Group Strategy Meeting**.

During the data extraction by applying Situational Mapping certain discourses were identified from the interviews and observation notes such as, 'Tårnby is a science council', 'Project not approved on a political level' and 'Not a tradition in Tårnby for making one project across all the schools, unless it is a law coming from higher up in the system'. These discourses are shown at the bottom of the Customer Journey Map in light blue.

The quotation below shows a teachers attitude towards the level of involvement that is necessary from a political level:

T3: (00:21:40-8)

"...At the political level, I don't think here has been a big involvement or communication in that way. But on the other hand, I am not sure if I think it is necessary. It depends on what you want to do with it etc. and what the council have wanted to do with it. (...) And it is nice that it hasn't been a concept that has been forced on us... "

In the Storyboard (figure 6.7), the third box shows Solvej meeting another teacher in the corridor and they discuss meeting to talk about the **Festival of Natural Science, Week 39 Project.** This project is included in the Councils, Science Strategy (Wøhlk 2011) and is therefore prioritised by the science teachers involved. This can therefore be seen as a project that competes with the School Garden Project, as it is prioritised and therefore a lot of time and energy is spent on the projects linked to the Science Strategy. The concept of a disturbance free environment was introduced in the theory section 5.1

(Windahl, Signitzer, and Olson 1997, p.22). The presence of other competing projects can be perceived as an element that disturbs the message that the Working Group wish to convey about school gardens, as the focus is on other projects. It is more difficult to reach the intended receiver if they are focused on something else. A quotation from the interviews that relates to this can be seen as follows:

WG1: (0:10:08.3)

"...yes, well, there are a lot of things required in order for a project like this to grow, I mean it is really about the right time and place, it's crucial. And in Tårnby there is not really a tradition for rolling out projects across the whole school system. I mean they have done that a few times and especially when there is a requirement by law..."

When the context of the communication is known the planner can use their situational knowledge to assess what is appropriate and effective to communicate in a situation (Windahl, Signitzer, and Olson 1997, p.22).

Aspects of decision-making and communication by decision makers have been presented in the above section named Descision Making and Communication. The importance of management making decisions and of how they then communicate them to their employees has been illustrated. Three relevant discourses in Tårnby have been presented, that show how the level of political involvement can affect a project. Science projects that are nationwide seem to have higher priority in the council area and these projects can disturb the messages sent about the school garden project.

Working Group, Cooperation, Network and Support

In the Communication Planning, it was stated that planning the communication enhances the chances of succeeding with the communication message and that people react to it (Motee 2013, p. 55, Windahl, Signitzer, and Olsen 2009, p.1-6). From the interview with the Working Group coordinator it was revealed that the Working Group do not have any real strategy for how to communicate the Haver til Maver project in the council, as shown in the following quotation:

WG1: (0:04:16.3)

"Then we have had that brochure, then we have had that exhibition in our entrance hall, downstairs in that glass cage, there we have had a big exhibition with a lot of plants and

the like last spring. Yeah, the brochure there, I have had, well we also have some formalised channels, we have some networks e.g. here in the council area where you can, I have one from each school represented in the network and then I can unfold something and then they can take it to their subject teams etc., right (…) But, so we have of course also taken that road and the school managers have had it presented in their network and so. So that is, it has been via both informal and formal channels. But we have not, I mean in that sense we have not had any big communication strategy…"

As seen in the quotation above, despite the fact that the Working Group does not have any clear communication strategy, some things are being done and they have several initiatives that are meant to aid those interested in implementing a school garden or keep continuity for those who have started.

In the Customer Journey Map, Solvej meets a member of the Working Group in the touchpoint called **Visits PUC**, this is an opportunity for her to network and receive suggestions about where she can get help for implementing her school garden. While there, she receives a start-up box with posters and seeds and documents to help her on her way. This initiative can be seen in the comment from the interviews by WG1 below:

WG1: (0:18:37.3)

"… for those groups that have been working on it (Haver til Maver) the last years, we have made some start boxes where they got some seeds and some lettuce plants and the like to get started…"

However, a comment from one of the teachers interviewed was that the content of the box should be simple and contain seeds and crops that were guaranteed to succeed, in order to maintain motivation amongst teachers. This will be elaborated on in the section about the summer holidays later on in the chapter, which presents how teachers are motivated based on their successes.

There are two different issues seen in this situation, teachers who go to pick up a box have already initiated the process of implementation and have shown a real interest in starting a school garden. At the same time there are teachers that are harder to encourage and one of the reasons for this is given in the interview with WG1, where she shows that she is aware of this issue:

WG1: (0:09:27.2)

" ...Well, a thousand projects reach the schools inbox, pigeonholes and shelves and such every day, about Cancer Society and Health Week and motion in the teaching and all kind of stuff, right..."

From the data collected, it can be seen that people in the school area are often very busy, have many projects going on and receive a lot of information of all kinds. In the Customer Journey Map, this is illustrated back-stage in **WG sends out Leaflet** and in **Planning next School Year** front-stage in Solvejs' emotions and attitudes as well as back-stage. This information overload can also be seen in the Storyboard when Solvej enters the staff room in the morning and sees all the posters hanging on the pin boards and all the leaflets in her pigeonhole. She also experiences it at the end of the day when she checks her emails. As introduced in the theory about communication, it was stated that when communicating complex messages, a disturbance-free environment is necessary and the more elements that can disturb the message the lower chance of reaching the intended receiver (Windahl, Signitzer, and Olson 1997, p.22). The many other projects already going on in the council, worries about the up-coming school reform and the fact that a lot of proposals for new projects are received on a daily basis, challenges the Working Group in getting through with their message. In the interview with one of the teachers, it is stated that:

T2: (0:15:24.7)

"...You have to present it, well an email is, we get 1 million mails, so, then it is just abandoned, that I do not believe in (the mail). If you are not interested already before you receive the email, and then it comes and you think 'yes, that is me', but if you just get an email, well okay, right, then it just gets deleted, I think"

In the above quotations, it can be seen that different actors stress the fact that teachers receive a lot of emails and information every day. If Haver til Maver is to be welcomed by the schools, the Working Group's communication about it has to be communicated in a way that catches the teachers and managers attention. Despite this fact, the Working Group has still chosen to send out a leaflet in order to promote the project, raise awareness and as the initial way of inviting to the start of the garden season through the **Kick off Day.** According to Windahl, Signitzer & Olson (1997), communication would benefit for involving some degree of creativity as well as

systematic aspects of ensuring the right people receive the relevant message (Windahl, Signitzer, and Olson 1997, p. 20). By sending out the same brochure to schools and nurseries, it can be argued that the communication suffer from a lack of both creativity and systematic thinking; the brochure is most likely to disappear in the pile of other written material, and sending out the same information to different segments of the target population can result in unspecific communication. In **Planning next School Year, Visits PUC** and **Ideas** several light bulb ideas about alternative channels and mediums are presented in the Customer Journey Map. A quotation that represents these ideas follows:

T2: (0:15:24.7)

> *"...Before you start your new class up in the spring, (...) at a pedagogical advisors meeting at the schools, for example, it is added as a topic on the agenda from the science group or the science network, we have this point that we would like to be addressed at all schools (...). Who should we choose for next years school garden round...?"*

Another concept introduced in the communication theory is timing. This refers to both timing in relation to communicating the message itself, and taking into account other external events or projects (Windahl, Signitzer, and Olson 1997, p. 24). Communicating the message itself, in this case the Haver til Maver project is illustrated in the Customer Journey Map under **Planning next School Year**. Here it is seen back-stage that the Working Group perceive beginning of March as being a good time to introduce the Haver til Maver project in order for the actors in the council area to initiate a garden project before the summer holiday. However, the manager in the same touchpoint expresses this is good timing for introducing the next school years projects; starting up a school garden project in the following year. Further, as mentioned in the Descision Making and Communication section, taking into account the timing of when other projects take place in the council area is of relevance for the Working Group.

In answer to what the Working Group has communicated to people in the council area about the Haver til Maver project and if she thinks people know what support they can get from the Working Group, WG1 says:

WG1: (0:02:54.1)

"Well (sighing), that is a really good question. Because it has probably also been a bit of a secret group, right (...) but what we have communicated is that 'hey, it is a great project, it just about getting started. And then it has probably been a bit unclear for people maybe, what it is actually about…"

WG1: (0:14:12.7)

"No, that is a really good question, no I do not think that they necessarily do. I mean, as said we have not really thought about including the communication…"

Other interviewees also expressed that they did not know much about what the Working Group do, how they can help and that awareness about their existence is limited within the council area. This represents a communication problem as presented in the theory section 5.1 called a lack of communication (Windahl, Signitzer, and Olson 1997, p. 30). This lack of awareness can also lead to the teachers feeling alone in their school garden work, which can be frustrating and make it hard to keep motivation high. Some examples of this can be seen in the following quotations:

T1: (00:06:39-3)

"...And I have not had a lot of communication with either WG1 or T2 or WG2... I feel I have been really alone with it (the garden). Even though as a teacher you are alone with everything, but it has been a bit..."

T2: (0:26:15.3)

"Yeah, that I had to make the plan for the year by myself, how do I make a plan with Haver til Maver so it does not become bla bla bla, go out for 15 minutes and weed, what are the goals in this, what are the academic dots that we should take in. (...) If I take something else away from the curriculum, what is the relevance of doing this, so I can defend taking some other part of the science curriculum away, I thought this was very difficult. Yes, but also if you can include other subjects so it can be integrated more for the pupils that are part of it. (...) More than specifically one science lesson a week."

In the interview with WG1 she suggests that cooperation across the whole school system is important in order for success of the project:

WG1: (0:21:35.6)

"...and if it is going to succeed, then we have to cooperate. i.e., that it is not just one person, there should preferably be more, and there should also be some Management, I think that is the big challenge..."

One teacher feels that there has been a lack of communication about the Haver til Maver project in the council area and that the Working Group could have done more to nurse the teachers and suggests educating ambassadors as a solution:

T1: (00:09:49-5)

"… It (the communication) has been inadequate. I mean, I do not think, this about just handing the teachers boxes and some books and say get going, that does not do it …"

As introduced in the theory, when the aim is to motivate people to take action, communication often requires more than just information. This could be through combining information with interpersonal communication (Windahl, Signitzer, and Olson 1997, p. 23). Educating ambassadors as suggested by the interviewee could be one way of increasing interpersonal communication. Educating relevant actors relates to the first of the three E's presented in the theory chapter (Windahl, Signitzer, and Olson 1997, p.34-36). The ambassadors could be educated to be aware of communication opportunities and pitfalls, in order to obtain the best results for their school, as well as the practical side of designing, implementing and maintaining a garden. Education of teachers was also presented in the State of the Art as an important motivational factor (Blair 2009). Another suggestion could be for the Working Group to be present and visual at the schools.

The people interviewed vary in their knowledge of the Working Group, they all know the Working Group exists but are not all certain about what the Working Group actually does. In the touchpoint **Ideas** in the Customer Journey Map, many suggestions have been made for the Working Group to make more explicit the kind of support they offer potential implementers.

The Working Group has managed to create an awareness of their existence and the Haver til Maver project but the actors in Tårnby do not all know the details of what the Working Group does and what the project involves. The Working Group then has to

change the message so it focuses more on what they can do to help and the content of Haver til Maver rather than a focus on creating awareness of the existence of the project and the Working Group. Therefore it can be seen that the actors are at various stages in accordance to VanLeuvens concepts of reach, and frequency introduced in section 5.1 (Windahl, Signitzer, and Olson 1997, p.25). The Working Group has to target the actors according to whether they require more awareness of what the Working Group and Haver til Maver does, or more nudging to help motivate them depending on the stage of implementation they are at. The actors who are already positive towards what the Working Group has done will require more frequent messages in order to keep their motivation, the actors who have a wish to implement a school garden will require both.

Increasing the co-operation between the schools and within schools can also be a way of spreading awareness about the qualities of Haver til Maver. The Working Group would like the Haver til Maver project to be a community project and thus have an initiative called the Harvest Festival, which the intention is that it reoccurs once a year. Therefore the Harvest Festival has been selected as an important touchpoint to analyse in more detail, this follows in the next section.

Harvest Festival

The **Harvest Festival** in October shows that the teachers' attitudes towards it were very different according to how successful their gardens had been. For Solvej, it was a problem that the garden had failed over the summer holidays because they had no produce to take to the Harvest Festival. In her opinion, there is no point in participating if you have no produce to show off. Therefore Solvej was not present with her class at the Harvest Festival, which is also a day of networking and sharing experiences with colleagues across the council area, this event remained a back-stage event for Solvej and this attitude was also seen through the data collection.

Solvejs attitude to the Harvest Festival, shown in this touchpoint is reflected in the statement below by one of the teachers interviewed:

T1: (00:23:27-7)

"Yes, well, ... I've said that now we start with this Haver til Maver down here and talked a bit round and about then... trying to say to the classes that now we are starting, and we have planted and we have sown, be kind and take care of it, and I have looked

forward to a chef coming to cook with us in the autumn, but ... I do not know what happened, that is, nothing really happened, we did not have any products we could take over to the Harvest Festival, so I won't take a sixth grade class over to the Harvest Festival when they do not have anything to show up, ehm …"

Other teachers and managers had very positive attitudes towards this festival and saw it as an excellent opportunity to share knowledge and learn from one another. Solvej missed this opportunity as she was not present at the Harvest Festival and therefore the communication between the other actors happened back-stage. One of the teachers who did attend the Harvest Festival expressed her positive experience in the interview as follows:

T2: (0:16:32.9)

"...been allowed to harvest it themselves, they have been allowed to weed, we have been allowed to weigh and measure some of the squash we harvested. And so we participated in the Harvest Festival. And my partner actually previously made some zucchini burgers from those that we had harvested because she wanted also wanted to be part of it. They (the pupils) thought they were fantastic, so it was their suggestion that we should also contribute with them at the Harvest Festival. (...) So we came to the Harvest Festival with (...) and a squash cake and zucchini pancakes. We had created a book, that was half A4 paper, which they had drawn on about what we have done in the garden, which I laminated and made into a book, and we had that with us so judges who could look in it (...) they won a prize (...), and were really proud of it, (...) they showed it to our head teacher there and (...) 'it's beautiful' and stuff like that. So they have indeed made something, right now it's at rest, but I think we will start up again in the spring. And they've been really happy with it, and the parents have also indicated positively that this is what the kids say."

Some of the people already working with Haver til Maver see the Harvest Festival as an important element in the strategy of spreading the school garden concept in the council area. It can be a forum to collect people so they can network and learn from one another. As seen in the theory section; when planning communication it is important to take into account the resources that the receiver has available to them (Windahl, Signitzer, and Olson 1997, p.36). One interviewee sees the Harvest Festival as an easy way to gather people without having to use too many resources on it, as resources are

scarce in this area:

M1: (0:37:10.2)

"...We held a big Harvest Festival (...) And WG1 arranged it, it was held in our school garden. Now I remember that (...) it was a way to get this to grow, that we hold a yearly Harvest Festival every autumn and we will slowly make it a bigger and bigger success, yes, spread the word, about the Harvest Festival. Where you can come and see what others have planted..."

M1: (0:37:10.2)

"....It is that in relation to the resources and energy we can put into this (the Harvest Festival), (...) the problem is that many teachers feel a time pressure in relation to the workload they are under. (...) So it is better to meet at a Harvest Festival than a coffee meeting in the afternoon..."

It is argued that at the Harvest Festival there are a lot of people with various levels of knowledge, skills and expertise of working in the school garden represented. As it has been seen that lack of resources is a problem for many of the interviewees then the Harvest Festival could be a forum where people can network and share their knowledge without having to spend too much time and energy finding people who can help and then having to approach them individually. T2 has made logbooks with her class that they took to the Harvest Festival to show their work to others. This is seen by the researchers as another way of contributing to the knowledge sharing and is a way for classes without any produce to share what else they might have done during the year.

In conclusion, it can be seen from the above statements that the attitudes amongst the interviewees towards the **Harvest Festival** are a mixture of both positive and negative depending on how successful the schools were in growing their crops. This can be related to the summer holidays and the analysis to follow. Some see the Harvest Festival as a forum to strengthen the school garden network in the council area and can be incorporated in to the school day, so the teachers do not have to use more of their valuable time networking. The concepts of medium and channels were introduced in the theory section 5.1. The Harvest Festival can also be a medium to telling other good stories through different channels for example, showing the pupils logbooks, to show that school gardens are about more than just the crops produced (Windahl, Signitzer, and Olson 2009, p.17). Therefore the Harvest Festival appears on the Customer Journey

Map as an idea light bulb, in the **Ideas**, where it has been recommended the Working Group use some resources on selling it as a yearly event for everyone.

Summer Holidays

It can be seen that during the **Summer Holiday** in July and August, limited activity is taking place; front-stage Solvej faces the problem of not having managed to get support from parents and pupils to look after the school garden in the holidays and she is therefore very frustrated about this. This frustration was also represented in the Persona information sheet, seen in figure 6.5. This is a problem for teachers and pupils' motivation if they have worked in the garden and have nothing to show, it can also put other teachers off starting up. Therefore, the challenge of getting someone to look after the garden during the summer holiday could be seen as another practical challenge that could keep people from starting up a school garden project or keeping consistency. This was also an issue found in state of the art (Blair 2009; Center for Ecoliteracy 2007; Hazzard et al. 2011; Ozer 2007). The issues raised could also be seen in the data collected through some examples in the following statement:

T1: (00:25:40-6)

"Well, I had a few parents who said, they thought that was great ... that also go and cultivate gardens elsewhere... But I did not manage to engage them either. That is, all of a sudden time flew by, right. Then I thought, ok, but then said to the kids, now we are going to start and you can go over in the summer holidays and weed, or if you find something to eat ... I did not manage to organise it. It had to be organised much more than I had remembered from last time...."

Back-stage on the Customer Journey Map, at another school the teacher working with the school garden did experience parent support, which assisted in ensuring great success of the garden and avoided that it died out during the summer. This can be seen in the following quotations from the interviews:

T2: (0:00:24.9)

"...And throughout the summer there was parents that looked after the garden with their children...."

T2: (0:30:05.0)

"Well, the first year...there were no more than two families that looked after the garden

for the whole summer...this summer I got all the weeks covered by different families from my old class...So the first year a bit difficult, second year much better...I can also see that one of my colleagues managed to find parents to look after the garden as well, it looked very orderly when we came back, well you could see that time had been spent in the gardens over summer"

According to interviewees, the success of the school garden in the summer holidays is very important in order to harvest some produce in the autumn. If the experience is negative then there is a higher chance that the teacher gives up and does not want to continue with the garden and there is also a higher chance that the good story turns into a bad story that can affect other teachers in their motivation to implement and work in the garden. In the **School Start** Solvej comes back from the summer holidays to find her garden dead. A statement that shows the above example of a good story turning to a bad story is:

T1: (00:25:14-0)

"...I have nudged a little to the lower-stage teachers last summer when we had to write the plan for the year, 'don't you want to join Haver til Maver' (...) but they saw how hard I slaved away down in the garden and thought, no way."

The fact that her colleagues have seen her work hard in the garden without having any produce at the end of the year has had a negative effect on their willingness to join her in the school garden.

It can be seen in the following quotation that some teachers measure the success of their garden by the amount of produce they can grow from it. The following statements show how the interviewees discuss the success of the school gardens in the area:

T1: (00:04:49-0)

"...I do not think it was much of a success. When we came back from the summer holidays nothing had grown either, because it requires nursing and we should have started earlier..."

At the **Science Group Meeting**, Solvej has heard of another teacher at a different school that has had lots of trouble in the garden with vandalism and so on, but it is still

a success in Solvejs eyes because some produce came out of the garden despite all the problems. This is reflected in the following statement from T1:

T1: (*00:26:22-5)*
"I have heard about T2 out at another school (...) *But I know that she got some products out of it. I thought that was fantastic, I missed that a lot (laughing)..."*

Another interviewee says that a teacher's drive to set up the garden and go ahead can be affected by where they are in their career and a fear of failure:

WG1: (0:21:35.6) *...And if you are not in a place in your career where you think 'what the heck', now we will plant some seeds and if nothing grows then it will be all right anyway. If you measure your identity by the success of your projects, that they should be successful...*

As seen back-stage in this touchpoint, some teachers used the death of plants as a learning experience for the pupils, which can be seen in the following quote:

*T3: (*00:04:41-6)
"...And some of the plants were dead (...) why did they do that and so on..."

Seeing the dead garden as a learning opportunity instead of a failure can add to a more positive and broader view of working in the garden.

In conclusion to this section, it can be seen that the **Summer Holidays** are a critical time in the school year for a school garden, as there are no children or staff at the school over the holidays. It is unfortunate that the summer holidays are right in the middle of the gardening season, and are a time where the plants really have to be taken care of. Therefore, it is important that the Working Group and the schools find solutions to who can take care of the garden during the holidays, as the amount of crops that come from the garden and the stories that are told about their work in the gardens affect the teachers motivation for working with school gardens.

Teaching Environment, Motivation & Commitment

In order for some teachers to see the point in Haver til Maver, they have to be able to

link it to their own subjects so it becomes more that just a one day visit, or event. It can be seen in the Storyboard that Solvej can see the link to her home economics class. In the Customer Journey Map, there is some instances back-stage where people cannot see the link, for example at **Planning the Next School Year** and **Meet Wg1**. This issue has also been presented in the State of the Art (Blair 2009; Hazzard et al. 2011; Johnson 2012; Ozer 2007). This can be seen in the following statement from one of the managers interviewed:

M2: (00:24:00-8)

"...the challenge will be to present it (Haver til Maver) as something you do instead of something else … and to think it into the context of the teaching in this way. Even though we are willing to adapt, sometimes then something needs to be taken in and we say this is something we have to do no matter what or this is a branch of something we have to do and something we have to present. That you can do with this finished concept that is ready to take in and carry out. That transformation that has to be in the concept and that understanding that needs to take place for the teachers, that this is something you can take and replace something else, or it can be something that is easy to take in. That I think is the barrier for saying oh no, then we need to find out how I can establish, I need to talk to the gardener department if they can deliver some soil, I need to get hold of some seeds and sprouts and potatoes and everything else (...). Then I also have to figure out, how I can meet the children, how can I handle 24 children running around in the garden beds and be more or less in control, I mean, that I think is some of what is difficult"

This is an issue that the Working Group is aware of and was brought up in the first Working Group meeting WGM1. They discussed the need to integrate school gardens into many subjects, so it does not use all the science hours but can take hours from other subjects as well. It's not realistic to think that every week 2 hours of science is spent in the garden the curriculum for science is much broader than what can be taught in the garden. If the teachers see the link to their subjects, then there is a higher chance that they will react to some of the communication, for example emails about new initiatives. Some quotations that support this are:

M1: (0:12:55.9)

"...And it was my experience that the teachers cannot see the light if it (Haver til Maver)

does not support the academic content that the teachers are judged by. They have to be accountable for, test how well the pupils read and write, not how well they boil a carrot. So therefore, Haver til Maver should support the academic content..."

M2: (0:17:54.6)

"But so far it has been presented as something you could do, it is an offer, it is something you can choose to do. If you do not think about it and familiarise your self with it, (...) and it does not get presented, it is not that convenient for me to include it. Then I think, it's filtered out, to the category of 'this is something new'. It might be that you have received information and the information is there, but I don't take it in and i.e. it's not something that imprints itself in my brain as a possibility."

This can emphasise the importance of visualizing how the school garden project can be linked to many different kinds of subjects. One of the Assistant Head Teachers interviewed points this out:

M2: (0:04:16.1)

"… because we have too many irons in the fire and that is part of why you say 'Well some things we choose to do and other we choose to do without, and some of it the teacher are able to incorporate and some they cannot', and it is a lot like I would say where is the sphere of interest in relation to some of the things that should hopefully be initiated."

One important motivation for teachers found in the State of thet Art, was seeing their pupils working in a fun learning environment (Blair 2009). Another theme found in the data, was that of the teachers reactions to seeing how their pupils worked in the garden.

T1: (00:05:04-9)

"… But they found that it was fun to plant, they found that it was cosy to go down there and tinker and had many ideas about what we should use the things for"

From the observation of first Working Group meeting WGM1 it could be seen that watching the children whilst engaged in a discussion about the garden can create positive stories which are told throughout the council area. This was also mentioned in

the interview with WG1:

WG1 (*0:27:09.2*)

"… it is certainly also so fine when you hear those young children discuss whether it is a parsnip or not, 'it is a parsnip, I am telling you, I told you it was a parsnip"

The following quote does not do justice to how the teacher was actually telling this story; there was lots of emotion in her voice and her facial expressions and body language also showed excitement and pride in her pupils' actions:

T2: (0:09:45.6)

"...In that way it is two different concepts (Krogerup and Tårnby)… quite different. But in a good way I think in that, well what has been with our old class, they were very felt that it was their garden and took care of it, and if they biked a tour in the weekend and somebody had seen that there had been a break-in in the shed then they called to tell it, right, and 'well, our crops are not damaged, it is only the shed that is broken up'. So they, well that class they felt that it was very much their garden and that they took care of and so, so they have very very happy for it..."

Some other areas that are relevant for the teachers in relation for successful implementation of school gardens to occur are lack of resources, such as funds, as well as teachers' level of knowledge, skills and competencies in order to work in the school garden. These issues were also found in the literature in State of the Art (Blair 2009; Hazzard et al. 2011; Ozer 2007; Sly and Eichorn 2014). The quotation below shows an example of a teacher who feels she has a lack of knowledge and skills in order to implement and work in the garden with her pupils.

T1: (00:27:42-6)

"Personally, I felt very limited in relation to my own abilities in the garden with 25 pupils at once (...) having eyes in the back of my head and talking to them about what are weeds and the like ... I thought that was difficult. (...) and engaging the children in the gardening project. (...) Just some simple things and then start with them the first time you jump into it. Yes, but start with some simple things and then maybe next time develop the garden to something more and something more. (...) Again make the foundation a bit tighter and choose something with success criteria straight away, so the

pupils also have a successful experience straight away..."

Relating this to the Communication Planning presented in section 5.1, where it was stated that lack of resources could keep an individual from reacting to communication if these are perceived as constraints (Windahl, Signitzer, and Olson 1997, p. 22). These challenges were also reflected in the empirical data, which is depicted in the following quotations. The first is from an Assistant Head Teacher, where he is weighing up the effort required to carry out a Harvest Festival in relation to what the participants actually gain from attending:

M1: (0:37:10.2)

"......It is that in relation to the resources and energy we can put into this (the Harvest Festival), when at the same time there has to be so much development, then it is to make sure that the Harvest Festival gets a life of its own, so people can meet there, and it could also be a way to spread it out. .....the problem is that many teachers feel a time pressure in relation to the workload they are under..... Then it is better to meet at a Harvest Festival than meeting at a coffee meeting.....So we will strengthen the Harvest Festival above all else."

A difference of opinion in relation to the role of economy in implementing a school garden could be seen in the following quotations:

WG1: (0:21:35.6)

" ...Well, I think, the economy for it (setting up a school garden) is a really small thing, if you want to do this it does not cost the world..."

T1: (00:10:38-9)

"...because it requires more, also economy, I mean, where should we get gardening tools from, gardening gloves, I don't have a single penny...it is really expensive to buy gardening tools and keep things going..."

This can be considered to be a situation of lack of social perspective taking (Windahl, Signitzer, and Olson 1997, p.22). Hence, the result of this can be that the Working Group overlooks challenges that are important to the teachers thereby creating the situation where the teachers' needs are not taken into account in the communication.

Sub Conclusion

Having management that back up the school garden initiative, having a suitable space that is nearby, and teachers who can see how working in the garden connects to the subjects he or she teaches are all relevant areas in order for succeeding in implementing a school garden. A motivational factor for the teachers was to see the pupils enjoying working in the garden.

Several obstacles to the implementation were identified, such as lack of support from management and colleagues; lack of skills, knowledge and resources. Especially lack of time, energy and the ability to see a clear link between the work in school garden and their subjects by teachers was an issue.

Some challenges can also turn into opportunities; for example plants dying can be a learning activity, as well as plants that survive and are eaten. It is the teachers' attitude and how they see things that are important. This can be seen from the interviews, where one teacher seemed more negative, whereas the two other teachers who had succeeded with the garden were much more positive towards the school garden work.

Solvej does not attend the Working Group's two most important meetings in terms of motivating and networking in the area. A returning issue in the empirical data is a request for more network, support and community. In order for schools to want to implement a school garden they have to know of the Working Groups existence and what kind of support they can offer the schools. If teachers can see how a school garden relates to their own work then the chances of them showing an interest in the project will rise.

7. RECOMMENDATIONS TO THE WORKING GROUP

In the following chapter, recommendations for the Working Group will be presented. These recommendations are based on the findings from the analysis of the empirical data collected in this thesis.

Lack of Communication Strategy

Despite the fact that the Working Group has several initiatives in order to spread the school garden concept to more schools, they do not have any clear communication strategy for how to do this. Based on the analysis and the communication theory the Working Group is considered to benefit from developing a more defined, targeted strategy for how to communicate to the schools. If the Working Group is to reach the teachers and managers with their messages about the Haver til Maver project, they could benefit from using more creative channels and mediums than sending out emails and brochures. Which in the analysis have been presented as having a high risk of disappearing among the other written project proposals and information the schools receive. Recommendations to the Working Group are:

- Present the project potentially in a video at a pedagogical advisors meeting during spring
- Move the Working Group's exhibitions and model gardens out to the schools
- Apply more interpersonal communication

Ensuring crop outcome / Lack of success, summer holiday

One main factor for perceiving the school garden as a success was getting an outcome in terms of crops. This is important for the Working Group to take into account when composing their start-up-kit to the teachers, in order to maintain their motivation. This is also an important aspect for creating positive stories of success in the Local Council school district. In relation to problems in the summer holidays, the school reform can be seen as part of the solution to this in that there is an intention that schools will have a greater cooperation with other after school clubs, associations and professional bodies. Recommendations to the Working Group are:

- Start up kit should contain seeds and crops with greater chances of success
- Communicate possibilities of school gardens and the link to the school reform

clearly to the schools

Network & Support

Several suggestions of how the Working Group could support the teachers and strengthen the network were revealed. Recommendations to the Working Group are:

- Nurse teachers more through reminders of when to do what in the garden.
- Increase cooperation and community involvement, where ambassadors and outside professionals can be utilised after the school reform
- Change the focus of the Harvest Festival to include more of the class work carried out throughout the year.
- Create a ready to go concept
- Create step by step guidelines for how to get started with Haver til Maver Tårnby

Lack of communication & knowledge about Working Group

It was found that part of the problem related to implementation of school gardens stems from lack of communication about what the Working Group can actually do to support schools in implementing and maintaining school gardens although there seemed to be an awareness of their existence. Recommendations to the Working Group are:

- Make it more explicit what the they can offer schools
- Invite the teachers and mangers to their Working Group meetings occasionally

Lack of resources

Lack of resources was found to be a challenge and different views on this issue were stated between the Working Group and interviewees. This could create a situation where the Working Group overlook challenges that are important to their receivers. Recommendations to the Working Group are:

- Educate school garden ambassadors
- Assist the teachers in obtaining the necessary skills, for example through workshops
- Create possibilities for working with school gardens on a smaller scale that requires less commitment. For example transportable gardens on bikes that can

be moved around to different schools

Link to own subject

The Working Group in Tårnby help teachers link their subjects to the school garden project once they have decided to go ahead. However, being able to see the link to their own subject is an important factor in order for teachers to see the point and be motivated to initiate a gardening project. In this way the link to their own subjects can be used to motivate teachers to implement school gardens, instead of waiting until the decision to implement school gardens has been made and then assisting them. Recommendations to the Working Group are:

- Make the link between school gardens and various subjects more explicit
- Point out how school gardens can fit into what the teachers are already doing instead of something that are put on top of everything else

Link between Local Council policies & Haver til Maver

Linking the Councils policies more in order to make a stronger argument for the relevance of the school gardens without 'telling people what to do' was found to be an opportunity. This can also aid teachers in seeing the link to their own subjects, an important issue presented above. Communication can also be used to work with the awareness that other projects create noise and disturb the messages being sent out by the Working Group.

- Visualise the link between the Local Council policies relating to school gardens
- Working group should take other projects that conflict with school garden messages into account in their communication plan

The above recommendations present possible action areas in order to strengthen the Working Groups communication around their work with Haver til Maver Tårnby. The recommendations are presented in the Customer Journey Map and it is beneficial for the Working Group to peruse this map whilst considering the above recommendations. At the same time the Working Group can also be inspired by the Customer Journey Map, for example, from studying touchpoints and considering their own experiences in these areas.

8. DISCUSSION & FUTURE PERSPECTIVES

The first part of this discussion concerns how the findings of this thesis compare to the State of the Art. The second part will discuss the methodological considerations in relation to the Theoretical Framework, empirical data collection, implementation of possible solutions and perspectives for future research.

Relation to State of the Art

Working Group was not a focus area in the State of the Art, as none of the literature found directly includes research about using communication theory in order to communicate school garden projects to potential implementers. Therefore, this is considered to be an area that contributes to the State of the Art through this research. The majority of the research found in the State of the Art was based in California and other international contexts where school gardens are more established and integrated in the curriculum. In Denmark the level and integration of school gardening is not as high and therefore, the future research should also focus on how to awaken teachers' interest in the first place. There was found to be a general lack of research about awakening teacher's interest in school gardens through the literature search. The challenges to implementation represented in the State of the Art are more concerned with after the decision to implement has been made.

A request for more support, networking and knowledge sharing was seen as a repeating issue in the empirical data collected. The importance of community, support and involvement of several different actors in order to create a successful garden was also seen in State of the Art (Blair 2009; Hazzard et al. 2011).

Lack of support from actors such as school management, volunteers and parents were seen to be some of the challenges of school gardens seen in the State of the Art(Blair 2009; Hazzard et al. 2011; Ozer 2007). This was also a factor seen in the thesis research, where more involvement from colleagues and managers generally, and parents in the holidays was a wish from some teachers. It can be argued that developing a communication plan could aid some of the problems in involving and motivating these actors to participate in network activities such as the Harvest Festival. This could especially be true if the focus of the festival is changed slightly to include more than just

the showing off of produce grown in the school gardens.
From the data analysis, it was discovered that seeing the link to their own subject and the academic learning outcome is a relevant issue in order to motivate the teachers to see the point of doing a school garden project. This was also seen from State of the Art, where other research had found this link being of importance (Blair 2009; Hazzard et al. 2011; Johnson 2012; Ozer 2007). The Working Group in Tårnby help teachers link their subjects to the school garden project once they have decided to go ahead. However, being able to see the link to their own subject is an important factor in order for teachers to be motivated to at all initiate a gardening project and this factor could be strengthened through planning communication.

In both the State of the Art (Blair 2009) and the analysis of the empirical data another motivating factor for the teachers of working in the school garden was experiencing the pupils enjoying being in the garden. Experiencing this can only happen when implementation has taken place. Therefore, experiencing this by visiting other school garden projects and hearing positive stories from enthusiastic teachers, managers and pupils could be of importance. This was also part of the Working Groups strategy, where spreading the good stories through network events like the Harvest Festival is a central factor.

The Working Groups strategy for the Harvest Festival was backed up in the empirical data by some of interviewees, as they also saw it as a forum for strengthening the school garden concept in the school district through providing a medium where teachers and pupils can exchange ideas, share knowledge and show what they have learned throughout the year. Harvest Festivals were not found in the State of the Art specifically, but some of the potential effects and uses of a school garden found were that they could strengthen the local school community and social networks (Blair 2009; Johnson 2012; Ozer 2007).

Management decisions and how they are communicated are important issues. For example, lack of communication from management has been found to be a problem for some teachers. Positive communication in the form of praise, showing an interest in what the teachers and pupils are doing in the garden and spreading the good story about what your teachers have worked on with the pupils reinforces the teachers work and motivates them. There seems to be a conflict in that some interviewees wish for

more direction from Management and the Local Council but at the same time are still happy about not being told what to do. Other projects that are successful in the council school district are projects that have been decided from a higher level and are part of the Local Councils strategies and policies. It can be argued that a model that is both top-down and bottom-up is required in order for success of the communal school garden project, this requires both the front-stage and the back-stage have a closer collaboration.

Lack of resources in terms of finances, skills, knowledge and competencies to work in a school garden are challenges that can disturb implementation. In this relation, findings from the empirical data in this thesis are consistent with State of the Art (Blair 2009; Hazzard et al. 2011; Ozer 2007; Sly and Eichorn 2014). From a communication perspective, it was argued that when the lack of resources are perceived as constraints, then individuals are less likely to act on communication (Windahl, Signitzer, and Olson 1997, p. 22). For example, the empirical data analysis revealed that the Working Group and the teachers differed in terms of how important the financial issue is. Where it was found that the Working Group did not think of it as being a problem whereas the teachers did.

The problems relating to the school holidays found in this thesis are very similar to the problems found in the State of the Art(Center for Ecoliteracy 2007; Ozer 2007). Through the data analysis the teachers interviewed showed various degrees of success in finding people to look after the school gardens in the summer holidays, and all had problems with this issue at some stage. It can be argued that the summer holidays are an important time for the school garden in terms of producing crops and the problems relating to implementation and continuity of the garden can be enhanced through an unsuccessful summer holiday. Hence, it is an area that should be prioritised. As presented in the communication theory, this is a problem that is a mixture of both communication and resources and has to be considered bearing this in mind.

In the introduction an increasing political interest in Denmark within the school garden area was presented. These interests have been shown in terms of recommendations for including school gardens into the school system. Links between the school gardens and the school reform were also presented which was also part of the motivation for this thesis. Although the political level is considered of importance to the school garden

area, it was not included as a focus area when researching the State of the Art. Some of the challenges found could be linked to the political level, such as the general lack of resources that have been a continuous theme throughout the research and in the State of the Art (Blair 2009; Hazzard et al. 2011; Ozer 2007) and the link to the curriculum (Blair 2009; Hazzard et al. 2011; Johnson 2012; Ozer 2007, 846). The levels at which decisions are made and how they relate to the success of school gardens is also a relevant area for further research.

Methodological Considerations

The Theoretical Framework was presented in Chapter 5 that showed the link between the theories and tools used in this thesis. No studies were found in the State of the Art that used a Theoretical Framework combining the three areas of Communication, Design Thinking and Situational Analyses & Mapping such as has been used in this thesis. The three aspects of the Theoretical Framework will now be discussed in relation to working methods, the empirical data collection and how this approach differed from previous research in this area.

The process of creating the Customer Journey Map was an explorative approach. Due to the fact that no standard templates for how to do a Customer Journey Map exist, the researchers have been on their own explorative journey in order to find a way that made sense in this thesis. Combining data extracted from all six interviews, observation notes and the Touchstone Tour into one Customer Journey Map was an on-going process of adding, deleting, and finding new relations between the actors, objects, emotions, attitudes, discourses and lines of communication. This was a balance between ensuring it still represented what was extracted from the empirical data, while at the same time making sense and not ending up with too much detail. As there is no right or wrong way of doing a Customer Journey Map, one of the recommended ways to overcome this challenge is the use of gut-feeling and subjective judgement. This also related to the Design Thinking approach in which intuition is seen an integral part of decision making (Mootee 2013, p.193). As researchers, it was difficult to point out exactly what determined what made the most sense in the situation; it was a subjective judgement influenced by all the knowledge gained from literature and research. This relates to Adele Clark's view on Situational Mapping, where she states that in the creation of the maps, often something will seem "right or wrong" or "better and worse". She elaborates that this is a process of studying the map and provoking ideas where one

idea will always stand stronger in the researchers mind than another (Clarke 2005, p.89). Other researchers might have noticed other ideas and moved in another direction which would give another solution or analysis. Part of the postmodern view is recognising that there are many ways to view the complexities of the world. The end result of the Customer Journey Map represents one view of seeing the world.

The final visualisation of the Customer Journey Map is influenced by who was chosen as the main character for the Persona. Had the Persona been based mainly on one of the other teachers interviewed who had a more positive mutual relationship to their management, the manager would most likely have appeared front-stage, as these managers more explicitly back up the school garden projects. Therefore it can be summed up that having a different Persona would have represented a different reality and thus would have given a visual representation of the findings and a data analysis with a slightly different perspective but it would still be based on the same empirical data collection and the users perspectives.

Much time can be used once the Customer Journey Map is created in analysing each touchpoint and in the case of this research project time did not allow the researchers to go in detail with everything in the map. In the same way the explorative process of Design Thinking requires an iterative process (see figure 3.5) where possible solutions to a problem would be prototyped and tested again in the 'real world'. If time had been available carrying out this part of the process would have also added to the results of using these methods. The processes in this thesis have dealt with the first phase of inspiration and the second phase of ideation that was started but not carried through to the final part of testing ideas. The third phase of implementation was therefore outwith the scope of this thesis. This resulted in some touchpoints with light bulb ideas and suggested recommendations to the Working Group for possible focus areas in their future work. It will then be up to the Working Group to take these recommendations and choose what they think is relevant for them to work with in relation to the resources that they have at hand.

Adele Clark recommends Situational Mapping as a method for opening up the data and provoking researchers to analyse more deeply. This method was found very useful in opening up the data and using methods with post-its, messy and ordered maps assisted the researchers in being able to refer to a visual aid all the time and making it easier to

keep track of the data and making systematic choices. Adele Clark recognises that there is the risk of data paralysis when carrying out qualitative research and her mapping methods can aid creativity in situations like this. Having the maps was found to be a useful system in order to keep an overview in a process that seemed overwhelming and chaotic at times.

Using the method of Customer Journey Mapping had the same purpose and was found to be very useful in order to maintain an overview of the data throughout the process. The map was hanging on the wall making it visible at all times, and the researchers referred back to it many times throughout the research process.

However, a Customer Journey Map can be said to be a simplification of a very complex situation and must not be underestimated. When reading the map, the context of the research must be kept in mind, so that the complexity is not lost. It is important to remember where you are in the map and maintain an overview of the whole picture. The final result of the Customer Journey Map, Persona and Storyboard is a way to visualise the complexity of the situation in a more simplified and easy way, with the possibility for the researcher to go deeper into one area of interest. This is also a way to communicate the scientific research in an understandable way on different levels. For example, from researcher to researcher or researcher to the Working Group in the Local Council school district.

The methods used have also visualised the fact that there are many communication channels and mediums in a school that are ineffective due to the amount of information and messages that school employees receive every day. The methods of for example, taking photos and mapping a school have aided the researchers in their analysis of how the communication forums in the school can affect the situation by visualising the problems that have also been pointed out in the interviews. This indicates that communication was a relevant topic to investigate, and issues in relation to communication seemed to have an impact on the level of implementation of school gardens. This has shown the importance of planning the communication in order for the receivers to act on the message. This is an area that requires further research in order to find new innovative ways of moving around this problem and creating solutions. One-way of doing this is through completing all the phases of the iterative process in order to prototype and test solutions in real life situations.

Both methods of Situational Mapping and Design Thinking were found to be very time consuming. Despite this, it was found that using this approach was very useful in gaining a deeper insight into the interviewees' thoughts, experiences and views that were visualised very clearly in the various Design Tools. Both methods deal with complexities of the situation and deal with the situation at hand. This makes it harder to generalise or repeat findings. However, many of the findings related to challenges and opportunities in this thesis can be seen to be similar to what has been presented in the State of the Art, which indicates that there are some tendencies common to school garden research in general.

The analysis showed us that communication between the front-stage and the back-stage were important factors in order to ensure a successful implementation. There were many elements that were back-stage were it can be argued it would be beneficial to show them front-stage. The discourses that ran throughout the Customer Journey Map were also related to how back-stage and front-stage meets in the map, and how actors are motivated to implement a school garden. These are also areas that can be researched further in the future. From a communication perspective it has been discovered that many aspects of communication relate to motivation. In order to aid implementation it is recommended that motivational theories should be linked to this type of research in the future.

9. CONCLUSION

Researching the opportunities and challenges to implementation of school gardens in Tårnby provided the possibility to explore the context of which the communication around Haver til Maver Tårnby takes place. This revealed that many issues going on could interfere and disturb the communication. Therefore a holistic approach was found to be important in order to deal with issues that affect communication and include them in the communication plan. The Working Group mainly communicates through standard channels and mediums such as emails, and brochures. It can therefore be concluded that the Working Group can benefit from including more creative and alternative ways of communicating to reach the teachers and managers.

This knowledge has been used to develop recommendations to the Working Group about how they can take into account the challenges and opportunities and thereby strengthen the communication. This also revealed that not everything can be solved by communication and somehow it is important to distinguish between what is a communication problem and what is not.

The Situational Analysis & Mapping has been integral in opening up the data in order to find the relevant actors involved in Haver til Maver Tårnby, this has revealed a variety of actors from many different levels in the Council Area. The actors have also been shown to play various roles in terms of the communication and their levels of involvement in relation to supporting the implementation of Haver til Maver Tårnby. Actants have also been found that have been shown to provide inspiration to recommendations for the Working Group in order to improve their communication. Whilst the Design Thinking tools have contributed in constraining the data and providing visual representations and an overview of the communication situations in which to analyse the support mechanisms with the Working Group and generally in Haver til Maver Tårnby. These tools have also provided visualisations of the communication touchpoints in a school in order to analyse these areas more deeply and have provided insight into possible barriers to communication through showing various mediums and channels for communication in the school. The Theoretical Framework has enabled a user-centric approach, which shows the relation between all the elements studied in the implementation of school gardens in Tårnby Council school district.

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11. APPENDICES