



## **ABSTRACT**

This thesis documents how, through action research, I have explored methods and theories for improving my own educational practices in cooperation with students attending Sogn Jord- og Hagebruksskule (Norway's national school for ecological agriculture). One motivating factor for this research was to find ways in which I could make changes or betterments in my own teaching tactics in the direction of using practice situations in farming, gardening and 'green-care' farming as learning landscapes for realizing competency criteria in the curriculum. Another related motivating factor was to help students to identify their interests, abilities and goals toward further development and mastery in this vocation. In having them go through this metacognitive process, besides being helpful for their own identity, the idea was that it would help me know better how to guide them further on their path.

This formal study has lasted since September 2012. The research question evolved from, in the beginning, having a focus on building bridges between school-based and farm-based training, to the final thesis question as to how to build bridges between educator and student and their search for learning. Case study was used to trial experiential learning theories in didactics as well as theory in relationship building between student and teacher. To enable us to experience a progression in learning the case study comprised of two repeating practice sessions with the same students on the same farm providing education for children with special needs. Methods for gathering empirical evidence were subjective survey, participatory observation, interviews assisted by questionnaires, conversations and student journal notations.

This thesis is comprised of seven parts. In part 1 the introduction includes a biographical discussion of what has led me towards a final formulation of the thesis question. Part 2 explores theoretical considerations regarding the research followed by Parts 3 and 4 with a discussion of research strategy and methods. Parts 5 and 6 present the case study and reflections. The seventh part is devoted to concluding remarks.

# SAMMENDRAG

Denne masteroppgaven dokumenterer hvordan, gjennom aksjonsforskning, jeg har undersøkt og prøvd ut metoder og teorier for å forbedre min egen undervisningspraksis i samarbeid med elevene på Sogn Jord- og Hagebruksskule (SJH). Én motiveringsfaktor for denne forskningen var å finne måter å forandre eller forbedre min egen undervisning på, i retning av å bruke praktiske situasjoner i naturbruk og Inn-på-tunet som læringslandskaper for å tilfredsstille kompetansemål i læreplanen. En annen motiveringsfaktor i forskningen var å undersøke metoder for å hjelpe elever å identifisere deres egne interesser, ferdigheter og mål mot utvikling og mestring. Ved å føre elevene gjennom denne reflekterende prosessen, i tillegg til å være behjelpelig for dem, ville det også hjelpe meg å vite hvordan å veilede dem bedre.

Dette masterstudiet begynte i september 2012. Problemstillingen utviklet seg fra i første omgang, å ha fokus på hvordan å bygge broer mellom skolebasert og gårdsbasert utdanning, til den endelig problemstillingen å ha fokus på å bygge broer mellom lærer og elev, og deres søken for læring. Casestudie ble brukt for å prøve ut erfaringsbaserte læringsteorier, i tillegg til teorier i relasjonsbygging mellom elev og lærer. Mitt casestudie bestod av to gjentakende omganger med de samme elever på samme Inn-på-tunet gård. Grunnen for to omganger var for å erfare progresjon i læring hos SJH elevene. Metoder for å samle empirisk bevis på, var deltakende observasjon, intervju assistert med spørreskjema, subjektiv undersøkelse, samtaler og loggføring.

Denne oppgaven består av syv deler. Del 1, innledningen, inkluderer en biografisk diskusjon om hva som ledet meg fram til den endelig formuleringen av problemstillingen. Del 2 utforsker teoretiske betraktninger. Del 3 og 4 diskuterer forskningsstrategien og metoder. Del 5, 6 og 7 omfatter casestudiet, drøftinger og konklusjonen.

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Beyond the horizon of NMBU there are many others to thank. Students and staff at SJH have been my mentors for years. Their response and feedback to my teaching and fieldwork has given inspiration to continue in this vocation. Especially the past 1½-years, a number of students have assisted in the master thesis by offering feedback, answering questionnaires and engaging in conversation. SJH students Tuva Engebretsen and Inga Finck, their teacher Cecilie Bugge, together with PPU students Silje Djupvik and Viljar Grutle and Green-Care farmers Anne and Leif Grutle all partook in the case study at Straumøy Farm. This provided invaluable input and became the empirical heart of the thesis. Thank you all for the time together and the sharing of the farm and your time, feedback, thoughts, ideas and enthusiasm.

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# Burning for Learning

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*“Why should not we also enjoy an original relation to the universe? Why should not we have a poetry and philosophy of insight and not of tradition, and a religion by revelation to us, and not the history of theirs? The sun shines today also. There is more wool and flax in the fields.”*  
Ralph Waldo Emerson, Nature (1836 p. 35)

## 1 Introduction

A major motivation for starting this study was that I saw it as an opportunity to continue with ideas that arose through a [KIL<sup>1</sup>-funded](#) project from 2009 – 2011 exploring possibilities for establishing an alternative first-year study towards the Norwegian vocational agronomy degree in ecological farming and gardening. The partners in the project were Norwegian University of Life Sciences (NMBU<sup>2</sup>), Bio-dynamic Association in Norway (BAN), Foldsæ Educational Center and Sogn Jord- og Hagebruksskule (SJH). The project’s inception came from a request from the Biodynamic Association to NMBU to further develop the tradition of apprentice seminars that had been run in the 1990’s but discontinued. The alternative based its assumptions that there was a need amongst youth interested in agriculture to participate in a predominantly farm-based education for their first year of study. Based on this assumption, the project’s start-focus was to develop a profile for this farm-based, one-year education. Underway the project discovered a need for a new educational profile, coined “place-based entrepreneurship”, resulting in a new project initiated to develop this educational profile (Barane and Hugo 2011).

The idea of this new educational profile, “place-based entrepreneurship”, suggested a general curriculum content, but that each individual school need develop its own locally specific curriculum, including judicial and economic agreements with participating entrepreneurial partners (Ibid. p.2). With a typical local enterprise in rural communities being farming, and with my profession based on teaching ecological farming and gardening for this age group I was interested in working on the development of this curriculum. How and what could be done to integrate the current vocational agriculture training with the field professionals was what I wanted to explore. My interest was to be involved with the development of curriculum, in cooperation with students, the school and selected farmers.

In reality, my situation, after the project ended in 2011, was that I had 100 percent teaching position at SJH, and did not have time to pursue work with further developing the ‘place-based entrepreneurship’ profile. However, at our own local level at SJH, we were actually practicing

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<sup>1</sup> KIL = Competency development program in Agriculture

<sup>2</sup> NMBU: Norwegian University of Life Sciences

this profile in a number of ways; for example through short, one-week practice placements on farms for our students, through cooperation with the local elementary school, through incorporating young adults with special needs into the school farm.

In May 2012 NMBU announced that it was starting a new graduate program in education for vocational didactics in agriculture. This offering, combined with my interest to explore, research and develop teaching methods in vocational education in agriculture, inspired me to enter the program and simultaneously apply for a 50 percent leave of absence from my work at SJH. Since September 2012 efforts have then gone both towards identifying important issues to develop within my own teaching, and towards ways to improve teaching in general for students of ecological farming and gardening.

### **1.1 Course of study at NMBU**

The graduate work included three major assignments: 1) a pedagogical development project (PPUT 301<sup>3</sup>), 2) an inquiry into research strategies and methods and 3) a final master's thesis building upon the two preliminary assignments. At the start of the study each student was to identify an educational issue inspiring them to research and develop. This was the basis for the first research paper. It involved identifying and stipulating a research question, studying relevant pedagogical and didactic theories, researching strategies and methods relevant to that question and, perhaps most importantly, having a concrete teaching project from which to gather empirical evidence and experience relating to the research question.

Intention of the second assignment was to identify and develop deeper insight into research strategies and methods relevant to my thesis question. There was also encouragement to further develop the research question, or even begin anew if necessary. In my case I held more or less to the same issue, but found a need for refining based on insights gained in the first assignment.

The third step in the research work is the final thesis: clarifying and exploring a specific research question by applying relevant research strategies and methods out of pertinent theoretical and practical contexts.

### **1.2 Evolution of the research question; “learning to whittle”**

In entering the graduate program at NMBU the idea I wanted to explore involved integrating school-based, vocational education in ecological agriculture with farm-based learning. Reasoning for exploring this “extended education” was three-fold: 1) involvement with and interest in carrying further the above mentioned project entitled “place-based entrepreneurship”, 2) students at SJH continuously asking for more exposure to practice on real farms, and 3) through conversations with farmers expressing their frustration over how little involvement students attending Norwegian education in farming have with farms outside of the school. This led to the initial research assignment, entitled: *An Extended Education in Ecological*

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<sup>3</sup> PPUT 301: Practical Pedagogic Development course at NMBU



*Farming: How to develop an extended education, within existing curriculum framework for students of ecological agronomy, in cooperation with organic/biodynamic farmers, gardeners and other related initiatives?*

Conclusions from this project led me to some refinements in the research question for several reasons. Due to the existing framework at SJH it was possible for practice periods, but difficult to “extend” the education out onto other farms for periods of more than one week at a time; and for only one or two sessions per school year. Interviews conducted with farmers gave varied response regarding value of the single week practice sessions. Farmers experienced with apprentices generally meant that one week was frustrating and demanding for them, and that the student had little time to be familiar with the people, work and routines on the farm before it was time for them to leave. These farmers meant that three weeks would be a minimum, but were more interested in apprentices staying for three-or-more months. Three farms that I interviewed had experience and agreements with similar educational programs as SJH in England (Emerson College) and Holland (Warmonderhof) in which they offered three-to-six month internships (appendices 3, 4 and 9). These farmers meant that this was a good arrangement, both for them and for the apprentices. On the other hand there were farmers that thought that one-week sessions were a fine arrangement for ‘first-time’ visits; that they were less binding for both partners, were an opportunity for students and the farmers to expand their networks, and gave the students a chance to experience different farm operations before making a more serious commitment (Ibid.).

Based on this insight I felt that to pursue this question further in a master’s thesis would be quite complicated and demand more time than dispositional. I did not want to discard the issue of integrating school-based with farm-based training, but felt that within my existing framework it would be appropriate to find an adapted research question addressing essential goals of such an education. This issue preoccupied me for weeks on end while progressing into the second assignment in the master’s program: *Introduction in pedagogical research strategies and methods*. The assignment stipulated that we could use the same research question as the first project, but the first question was calling for change. It took time, a lot of reading, long walks, discussions with ‘critical friends’ (McNiff 2002) and several meetings with people working with similar questions before settling on a new, possible, research question.

This period of time could remind one of a chrysalis stage of metamorphosis between larval-to-imago phases for the butterfly in which the chrysalis metaphor can describe a period of time of inner transformation, introspection and digestion of earlier experiences, only later to emerge with renewed ideas and forces (O’Neil and O’Neil 1998). The summer months between completing PPUT 301 and writing the second NMBU assignment on research strategies and methods fit this metaphor. Many ideas were entertained as possible questions to develop; those that dominated follow:

1. *'The farm as arena for teaching and learning.'* This title arose out of the aforementioned project, "place-based education".
2. Another related direction arose through being involved in an initiative in Scandinavia working towards developing a three-year, farm-based education in Biodynamic farming and gardening. This program is organized through the Biodynamic Initiative for the New Generation, Nordic ([BINGN](#)), and is developing a program for apprentices to attend a series of educational seminars to complement the training they are receiving on their respective farms. I felt that this could be an area in which I could contribute and weighed this as a possible direction to go with my thesis question. A couple of scenarios were considered: 1) to free myself from SJH and work with this development, and 2) to explore and develop SJH's potential role as seminar partner for the BINGN initiative.
3. A third choice was to focus on development of a new initiative at SJH to integrate an internet/gathering-based Vg3- level study together with the existing Vg3 class of students. Here there would be six gatherings during the course of one school year in which both groups would follow the same curriculum. A research aspect here could be based on developing curriculum, guiding and leading the net/gathering-based students.
4. The fourth possibility entertained was to work with integrating SJH-education in ecologic and sustainable agronomy together with rural and regional development. The communities in the region of inner Sogn are developing a model of this, in collaboration with NMBU and inspiration from [Ruskin Mill Trust](#) in England. The students at SJH have an elective course in Sustainable Rural Development. A master's thesis could focus on developing the teaching-didactics of integrating these two. This tempted because it would be an extension of the case study described in the PPUT 301 assignment.

Understanding that these four alternatives would take me through retirement to complete I set out to find a central theme that was imbedded in all of these possibilities; find the leading thread. In August, together with the other master students, we met at NMBU with our advisors for a final counseling on research strategies and directions for our work. I expressed my dilemma of not being sure on which path to focus. One advisor suggested to follow up and develop the program for the new net-based students at SJH; another advised to research and develop a concrete teaching situation in one of the subjects that I have taught for many years, soil management. A third advised to go in depth into a teaching situation about subject matter in which I have deep knowledge and illustrate *key qualifications* that emerge out of the teaching method; to focus on what happens in meeting the subject material at several levels. Here one could relate to competency qualifications and learning, and use perspectives of first, second and third person. A fourth advisor implied that, regardless of what research question I landed on, I should write a text about the development history of my research question, of which I am doing now.

I left the meeting with more questions than answers, and headed directly up to a weekend seminar at Nordgard Aukrust in Lom. Arranged by the BINGN initiative, the theme was farm-based education in Biodynamic farming; directly related to the second of the possible research questions illustrated above.<sup>4</sup> Present at the seminar were Biodynamic farmers, apprentices, farm-educators and others with genuine interest in developing this initiative. Most relevant to my approach were questions based on *methods* of teaching an apprentice. The dominating response from the farmers experienced with apprentices was that practice was primarily central and that theory comes in to enrich. Each farm would have its strengths and weaknesses: the strengths being in “the community of practice” (Wenger 1998) with the productions of the particular farm and skills of the farmers and experienced apprentices. To complement the specificity of the individual farm experiences, seminars covering theoretical, artistic and social aspects would be arranged in which all apprentices would be expected to attend.

The core initiators of this program were taking on the task of design and actualizing. This seminar was an interface for interested fractions to share and discuss viewpoints, using “World Café” (Thunberg 2013) as a technique to gather input from all participants. My role was threefold: 1) to explore the possibilities of SJH as collaborator, 2) to share thoughts on development of the program, and 3) to explore this as potential for my thesis.

I quickly realized that this, as a research project, would be too demanding and difficult to coordinate. The need was to narrow the approach to a manageable, relevant question capturing the essence of teaching-didactics, whether through BINGN’s farm-based education or through a school-based education. My ontological position pointed towards doing research in closer a mental and physical proximity to the students, teachers and network connected to SJH. Couldn’t the leading thread of my vision, ‘the grain of sand’ or microcosm from which to take a standpoint be found at SJH? Silverman (2005, p. 64), in his book on *Doing Qualitative Research*, advises the researcher to protect him against ideas and projects that send him off on broad tangents to the specific question. Related to this, Otto Scharmer (2009) points out an inspirational strategy for working towards a future goal.

*Prototype strategic microcosms as a landing strip for the future... Prototyping means to present your idea before it is fully developed... A strategic microcosm is a small version of the future that you want to create that includes all core elements of your vision* (Scharmer 2009, p. 416-417)

Another inspirator, Parker Palmer, in a lecture he held about *The Violence of our Knowledge* for students at University of Wisconsin, refers to the value of ‘teaching from the microcosm’. Here he says, “Take a key passage or task, in which the essential tools, skills, perspectives and theories get learned. The other tasks will come by themselves... Teach the subject at a deeper level of understanding and retention (instead of drowning) them in facts...” (Palmer 2001 p. 21). In

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<sup>4</sup> Link to program: [BINGN seminar at Aukrust](#)

general Palmer is referring to teaching, but this attitude and approach reinforced Scharmer's ideas on 'strategic microcosms' regarding research and my situation.

These ideas, together with conversations with Aksel Hugo in June and September 2013, helped me to narrow focus in on core elements that **I** want to develop. We discussed what in my biography makes it important for exploring these issues. What do I want to carry into the future with my work? What is my 'biographical key', my 'secret garden' that gives inspiration and motivation? How can this connect to developing the art and skills in teaching of both vocational and other key competences exemplified in the Norwegian general teaching plan? <sup>5</sup>

During this period I kept an active diary in order to create a written perspective of thoughts; some of the significant ones here: What are essential aspects in these four alternatives? What can I develop within my own teaching, through action research, that mirrors issues fronted in these questions? What are common denominators?

Common for the alternatives are me being active in creating learning situations in which students unite experience with practical skills, ideas, ideals, and their own and other's theories and concepts. Common for the alternatives are myself as facilitator in the learning process, contributing through experience and skills as educator and practitioner. Common for all is the student as learner and whom the teacher can assist, or hinder, on their path.

In essence, what I was searching for was to find ways of developing the relationship between teacher and student in a way that would help them towards mastering the trade of ecological farming and gardening. This resulted in an evolution of the original research question to becoming: *What can I as teacher do to develop and create good teaching situations in which theory and practice weave together such that the student experiences a positive and motivating development of knowledge and skills in ecological farming and gardening?* I felt that by developing insights and conclusions from this research on my own teaching and relationships with students that it might have a spinoff effect for other teachers and farmers wishing to have apprentices.

With the third stage of the graduate work, the final thesis, there have come further refinements. In October, November and December 2013 I traveled to USA, Sweden and Portugal on separate occasions and met with farmers, educators, students and other key resource persons working with education in agriculture. This coupled with reading and teaching at SJH, led to adapting the research question to having greater emphasis on student – teacher interaction than in the previous assignment. Two incidents in particular inspired me to move in this direction. One was an interview with biodynamic farmer, Hugh Williams, in upstate New York, who has had many years experience with apprentices. I explained to him what I was working with developing teaching methods, and was interested in hearing from him about his experiences with

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<sup>5</sup> [Core Curriculum for Primary, Secondary and Adult Education in Norway](#)

apprentices. His emphatic response was that it is "... not the teaching, but rather the learning that is essential; and essential for learning is to be motivated, and for that to happen one has to be connected to what one wants to learn!" The other incident stems from 32 years earlier, right from the beginning of my journey into wanting to learn as much as possible about and become a skilled biodynamic gardener/farmer. In conversation with a 90-year-old retired consultant for biodynamic farming, Peter Escher, I asked for advice as to how to learn about this form of farming. His response was neither more, nor less than: "Do it!" I at the time was the student, and very motivated. Through actively "doing it", he meant that one will find the way to learn. Could this be applied to my role as teacher for the new generation who is burning to "do it" and learn by doing?

From a metacognitive view of self as student and seeing what draws me to learn, it is through this "being connected with something meaningful" that creates the curiosity and drive. I am student, learning the art and skills of teaching. How should then be my role as teacher in relationship to "my" students, whom, if they are to learn, the prerequisite is that they are motivated and connected from within their own inner self? It is the student that the teacher is assisting on their path; it is the student who is the learner in question; it is the student who is "burning for learning". Yet, at the same time, it is the teacher, and schooling situation or "site" that has a responsibility for, and hopefully ability to, identifying with and guiding the student into meaningful learning situations. In the previous assignment, after critical analysis of the research question, I placed myself as teacher as central subject and the student as recipient of learning through the teaching. By reversing this position, in reverence to the student as central subject and teacher as assistant, as guide, I feel that I come closer to the proper role in this interrelationship. With this in mind the research question then evolved to: *In cooperation with the student and their individual goals and abilities, how can I as teacher create, implement and develop meaningful learning situations that assist them towards mastering of essential practical and theoretical skills in ecological farming and gardening?*

Action research, supported by case studies, is a qualitative research strategy that I have chosen for working with this development. I will explain more about the strategies later, but central aspects involve a cyclical development of an area of work or subject that one wishes to improve (McNiff 2002). The evolution of my research question, having gone through many phases, exemplifies this cyclical development.

### **1.3 Biographical considerations**

Prior to describing the nature, progress and conclusions of work with this research question I feel it relevant to reflect back upon my path into and with teaching. Learning through activity has always fascinated me and, since my late teens, experiential education has been a central interest and occupation. As a child and teenager I managed satisfactorily with one-sided, scholastic learning, but thrived when learning situations combined practical and physical

activity; this being reflected by the types of jobs and recreational activities I sought. My earliest summer jobs began with doing yard work and painting houses for neighbors. While a college student I became frustrated with the academic nature of learning and extended the usual four-year bachelor program by taking two semesters free in order to pursue interests in carpentry and outdoor education. The first 'free' semester I attended a one-month course at [Hurricane Island Outward Bound School](#) (HIOBS). The second 'free' semester went to designing and carrying out a twelve-week series of wilderness expeditions for a young man struggling with narcotic conditions. This provided good background experience, impulse and a decision for returning to university and completing a senior bachelor thesis which focused on designing and implementing a wilderness activities program for an upper secondary level school. The thesis work was my first conscious exposure to philosophies concerning experiential education. In particular Jean Jacques Rousseau (1712-1778) and John Dewey (1859-1952), both advocates of learning through activity and reflection, provided useful theoretical help towards the underlying principles of design in the program.

After completing the bachelor degree in 1977, working with outdoor education dominated my life. Completing advanced first-aid in mountaineering and instructor-training courses, combined with working in the same field, led me towards becoming a qualified instructor for HIOBS and an instructor - examiner for the [Nordic Professional Ski Instructors Association](#). This was exciting work, yet very transient, involving moving to a new region every season. I felt a growing need to find stability and an even deeper connection between combining my inner values with career and lifestyle.

In the early 1980's I was introduced to and worked with a combination of Biodynamic farming and care for elderly and handicapped at [The Fellowship Community](#) (FC) in the United States. This became a turning point. Seeking for an opportunity to cultivate deeper spiritual values was coupled with active work in community with other people caring for land, plants, animals and folk. Skis and climbing equipment were parked, for a time at least, and full focus went into this work, especially within the aspect of farming and gardening. The community was home for approximately 60 elderly, in more or less need of care, and circa 40 resident co-workers and their families. All age levels were gathered in this intentional community focusing on holistic care and development of both the farm organism and the human being.

During the two years of working at the FC, I gradually took on a larger role in planning for daily activities and maintenance on and around the farm. This often involved working together with a crew of young and old with varying backgrounds of skill and capabilities. Continually there were situations from which to learn, and often situations from which to instruct and guide. It all seemed so meaningful. This quickly led to a decision toward dedicating my efforts in this direction.

Through marriage in 1986 my path led to Norway, with ecologic and biodynamic farming, in community with others, as a career focus. The first three years were devoted to a pioneering effort to convert Lysekloster Hovedgård, a conventional farm south of Bergen, over to biodynamic management. We collaborated with the Steiner School in Bergen and also sold produce at the farmers market in Bergen. During the autumn of 1988 I read about Sogn Jord- og Hagebruksskule (SJH) becoming designated as a national school for ecological farming and gardening. Having no 'official' training in farming, yet a strongly motivated interest, coupled with five years organic/biodynamic farming experience and an earlier career in outdoor education, this appeared a golden opportunity for a smelting together of interests and further development of competences. A two-fold application was sent, both to apply as student for the 1989-90 school year, and also as seasonal worker for the 1989-growing season. In the application letter I stated interest in continuing at the school with hopes to be able to contribute to its development and mandate towards educating of young farmers in ecological agriculture. A positive response on both accounts opened the door and, since August 1990, I have had a combined position as production manager in field crops and teacher in horticulture, soil-fertility management and an elective course in biodynamic farming and gardening. This position has provided a motivating and stimulating combination of both practical and developmental work on the farm, fused with teaching.

In addition to my work with SJH I have been an active member of the Biodynamic Association in Norway (BAN) and have served two terms on their board of directors. In this connection my efforts have been focused on training in biodynamic farming and gardening through the biodynamic apprentice seminars and as consultant for farmers interested in learning more about biodynamic farming in Western Norway.

This brings me to the current phase in my biography in which I am now student again, this time at NMBU. Due to practical reasons earlier I have considered, but avoided, being an official student. I have studied much on my own, in my free time and in preparation for lessons at school, but an organized study has had to wait. My focus is on developing my own insight and competency in teaching methods that can be appropriate towards helping young adults find their way into learning what is necessary for them to become a well-informed and skillful farmer, gardener and/or participant moving into the future. The hope is that this work will lead towards better communication and relational skills between teacher and student, and the ability for the teacher to improve and guide learning situations to the advantage for the student.

## 2 The Research Question and Theoretical Considerations

The current research question: *In cooperation with the student and their individual goals and abilities, how can I as teacher create, implement and develop meaningful learning situations that assist them towards mastering of essential practical and theoretical skills in ecological farming and gardening?*

In this chapter I would like to explore the work of different scholars who have had relevance and importance for my work with the research question. The question is embedded in a larger context in which an entire school is involved. Beyond the school the research question has to do with the student's holistic development. The question also touches on my own development as teacher in relation to the student. An analysis of the question shows that it can be divided up into several parts, each of which can be supported by theoretical insight. Below I will first explore the holistic aspects, thereafter the parts and theories that I see essential in supporting the whole. The theories and parts have few distinct borders; therefore overlapping is more rule than exception. In later chapters I will discuss actions taken in order to put the theories on trial.

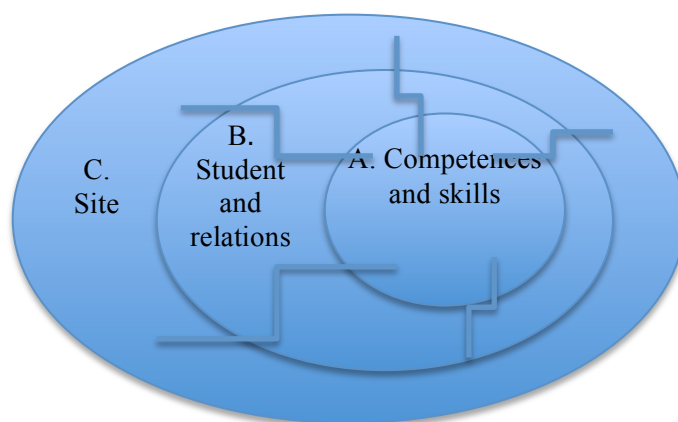
### 2.1 Holistic analysis

The question focuses on the student, his or her abilities and interests, the teacher's involvement with the student, and creating, implementing and developing meaningful learning situations towards mastering the trade. These elements, and the synergy of them create a greater whole than each of the independent parts. Aksel Hugo, in his article, *Being and Becoming a Genuine Teacher* (2012), discusses the education of teachers and value of self-education, on site and through practice, in order to acquire the necessary competences for qualification. The essence of what he presents is that learning a set of pre-stipulated criteria, outside of the context in which they will be used, lacks the exposure to realities the learner will meet in his or her daily life. What is holistic about on-site education is that there is not a distinct separation between the concepts and skills to be learned, the student and her or his immediate relationships and the community of extended relationships in which the learning is taking place. The intention of his argument is to integrate these three elements into a whole. One is attempting to create a learning space with direct links to reality such that the student experiences relevance to the concrete phenomenon they are meeting. An example of this is illustrated in the case study, discussed below, that involved SJH-students learning competencies and skills of planning, organizing and leading activities for children with special needs on a practicing Green Care Farm. Assisting and supporting the students were teachers –in-training, their class-teacher and the host farmers.

Hugo (ibid.) presents his viewpoint especially with the training of teachers in mind. This approach can also be applied to other fields of vocational training, for example the training process toward 'being and becoming a genuine farmer'. Whether the student or apprentice is in a school-based or farm-based learning environment there can be illustrated three common



denominators to both situations (see figure 2.1). 1) There is the site (zone C) in which the learning will take place. This site will continually evolve, as will the learner and related persons therein (zone B), along with the skills and competences (zone A) demanded at the time. Embedded in the site are physical and living frameworks with their possibilities and limitations, along with the human element with interpersonal relationships, expectations and capabilities that affect all involved. 2) A second denominator is the individual student or 'self' placed within the site (zone B). Within this zone are also the individuals that have immediate relations (teachers, fellow students or apprentices, family...) to the student. 3) The third denominator encompasses the competences and skills the vocation demands (zone A) of the practitioner that the student will strive towards mastering.



**Figure 2.1: Student qualifications as development of competence (A) connected to fields of relations and (B) embedded in self-education on site C. (After Hugo 2012 p. 32)**

My research question is to study how the student, in cooperation with teacher, can best use these embedded fields to develop. This assumes the teacher develops a conscious relationship to the student, connected to the site in which learning occurs and to the realm of competences for the student to acquire. Both teacher and student are placed in zone B, with the teacher having the larger toolbox of knowledge, skills and competencies from which to help guide the student's progress within points A and C. The question is focused on finding methods for the teacher to better assist and relate to the student and their progress at this interface. Viewing this from the perspective of the student or apprentice, they need as well to learn how to relate to the teacher or mentor in order to strengthen the learning outcome. The question can equally be applied to finding methods or suggestions for a farmer or gardener to use in his or her mentor role for apprentices or students in practice.

Skills in relationship building and communication are then obvious elements to consider. Another need is to find methods for reviewing student interests, abilities and competencies, in order to have a better understanding of what they from the start comprehend, find meaningful and can manage. If practice farms are to be involved along the student's path, then a review of the qualifications, interests, abilities of the farmer, and traits of each farm will be necessary. A

third element is finding time and room in the framework of a school-based training in which this personal guidance can unfold in reality.

## 2.2 Parts of the whole

Dissecting the holistic aspect into parts is my next step. The thought here is first to identify parts, theories and practical steps that are relevant to explore. Taking figure 1 as a starting point there are three zones involved: the zone of knowledge, skills and competences in zone A; the zone of the learner and their closest relations in zone B and zone C in which the learning is situated at the particular time and place. The content in zone A is relatively definable, being framed in through the qualifications and criteria demanded of the vocation. In a school-based education there are national guidelines and regulations, and locally adapted curriculum plans as steering elements.<sup>6</sup> In a farm-based education, or on-site based education, there would be criteria determined specifically related to the context. An example of this is the BINGN <sup>7</sup>initiative in Scandinavia or the North American Biodynamic Apprenticeship Program (NABDAP).<sup>8</sup>

Zone B is that of the learner and their closest relations. This is the realm of closest contact between participants in the learning situation and is the interface on which my thesis has primary focus. Here one comes into the socio-psychological realm as well as the realm where the learner stands with the overall competencies they carry with them from the past and on which to build. The teacher has as a primary role in *“understanding how people learn, and therewith also having an understanding of peoples’ way of being and characteristics.”* (Krogh and Jolly 2013 p. 43). In reality this shows the need for the teacher to learn to know his or her students, and then using this insight towards designing and implementing good learning situations for developing the learner’s capabilities. This is the realm where didactical and pedagogical skills unfold, are tested and challenged. In the section below several related learning-theories will be explored.

Zone C, as mentioned earlier, is the physical and socio-cultural province in which the learning takes place. It is the site, the community, the arena of learning. Learning occurs through participation and social engagement in activities that embrace the concepts that are important to learn (Smith 2003, 2009 p. 3). An intentional focus on phenomena and opportunities in a community enables a teacher or school to become aware of a magnitude of educational possibilities that support curriculum goals. In zone C the teacher needs to identify the points of zone A (knowledge, skills and competences) that exist in the social contexts and can be relevant to the curriculum. It is not enough to just send the student out into a random social engagement; the arena needs to be analyzed for its relevant content. In early stages of a student’s training process an important role for the guiding teacher is to ensure the quality of the site. Hugo points out that, *“in teacher education for sustainable development, a particular emphasis is put on the*

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<sup>6</sup> See in references: Utdanningsdirektoratet 1 and Utdanningsdirektoratet 2

<sup>7</sup> BINGN: Biodynamic Initiative for the New Generation Norden. [www.bingn.org](http://www.bingn.org)

<sup>8</sup> NABDAP: North American Biodynamic Apprenticeship Program: [NABDAP](http://NABDAP)

*need of seeing learning in context of the local environment and community. Schools as spaces of learning need to connect to the real life.*" (Hugo 2012 p. 30). More on this is discussed below in the section on 'communities of practice'.

### **2.3 A selection of relevant learning theories**

The magnitude of research, literature and theories concerning education seems enormous; I have but touched the surface, but much of what has been touched upon has borne fruit and given relevant insights and motivation. In this section I will present theories I have found useful, especially regarding the key points of the thesis question. I have two approaches. One is at a first-person level: learning to know and develop myself as person and teacher. The other is from more of a second-person level in cooperation with others: learning how to "*inquire face-to-face with others into issues of mutual concern*" (Reason and Bradbury 2008 in McNiff and Whitehead 2012 p. 12) and then creating meaningful learning situations that lead to experiences of mastering.

I explain this later in more detail under the chapter on action research, but this strategy need be discussed in short version here because it influences my approach to other theories involved. In the first-person aspect it is the researcher, teacher or individual (me) that is seeking development. I am working towards methods of understanding relationships and creating good learning situations in cooperation with students. Second-person research is involved through work in engaging my research subjects in exploring and testing theories focusing on creating meaningful learning situations for them. If research were to go further to the 'third-person level' it would regard the extended environment beyond those individuals with whom I have direct contact but that may benefit from the research results at the first, and second-person levels. I feel that there is no clear separation between levels one and two, because there is continuous interaction between them and they influence each other in ongoing cycles of development.

#### **2.3.1 Knowing one's self; first-person level**

Regarding the thesis question I would first like to explore how the teacher or mentor can develop his or her own skills and abilities in establishing the positive foundation for relationship building. This foundation building is an ongoing process and to a large degree has to do with personal development in the social realm. Many methods can be found to do this, but basically they all involve the practitioner developing a reflective practice and seeking methods to gain deeper insight into how to work towards the future in cooperation with others. The number of methods and ways to accomplish this are too numerous to explore here, but I can share some of those that have given me inspiration.

Looking within one's 'self' is an important process and skill to develop. "*Do I walk the talk or model the vision?*" (Palmer 2001 p. 6), is a question to ask oneself when one is to lead others. I know from experience that if I try teaching students one thing and not act accordingly that the façade is quickly revealed and respect is lost. How can I develop insight towards finding an

answer to that question? By reflecting on one's practice one works in direction towards revealing and developing actions, attitudes and skills. *"When a practitioner becomes a researcher into his own practice, he engages in a continuing process of self-education"* (Schön 2011 p. 299).

Meditative practices can be of great assistance in cultivating one's inner life of thought and feeling, and building upon this by developing as a person, not only in one's profession, but also in one's meeting with daily life. Otto Scharmer (2007), in his book *Theory U* discusses in chapter 21, 'Principles and Practices of Presencing for Leading Profound Innovation and Change', that many great thinkers and practitioners of innovation and leadership daily use techniques for helping them ground themselves in connection with *"their own purpose and essential self"* (ibid. p. 402). This work needs to be coupled with a noble goal to *"adapt each of your actions, and frame each of your words in such a way that you infringe upon no one's free will"* (Steiner 1983 p.19). Palmer (2001) was also very emphatic about this point; that if we are to develop towards an evolution of teaching with the learner in focus then we must look not only within our own practice, but look also at relationships between individuals and attitudes of institutions for *"seeds of action that violate the integrity of the other"* (ibid. p. 21). In Arthur Zajonc's book, *Meditation as Contemplative Inquiry*, he emphasizes that: *"Contemplative practice and its accompanying moral development can move us toward the possibility of true human encounters, to meetings where the core reality of the person across from us is more fully present before and within us. When this occurs, something intangible is sensed and exchanged. We live for a moment together in the world formed by our mutual attending"* (Zajonc 2009 p.141-142). The point I am trying to get across here is not a particular path of meditation or development, but that the practitioner sees the value of devoting time to inner development and reflection upon his or her own intentions, motivations and relations with their environment.

### **2.3.2 Knowing the student; second-person level**

*"At man, naar det I Sandhed skal lykkes En at føre et Menneske hen til et bestemt Sted, først og fremmest maa passe paa at finde ham der, hvor han er, og begynde der. Dette er Hemmeligheden I al Hjælpekunst"* (Søren Kierkegaard, 1859/1964, p. 96 in Nielsen and Kvale 2003 p. 326).

*"That man, when in truth shall succeed in leading a person to a specific place, first and foremost must ensure in finding him where he (or she) stands, and begin there. In this is the secret in all arts of assistance"* (own translation).

Getting to know the student is a priority, as quickly as possible at the beginning of a school year or practice period. This means, *"finding an interest in each person. Being curious about their experience of the world and of themselves"* (Jolly, personal comment). The relationships one establishes at the beginning of a school year, both with individual students and with the class as a whole, will influence its entire course. The first meeting with a class, the first meeting with a student, the first impression, leaves a deep mark that can tip either way on the positive/negative scale. I've experienced both and if the start is short of positive it can be difficult to turn. A

technique common in Steiner schools is that the teacher greets each student with a handshake and eye-to-eye contact at the beginning of a lesson. As experiment this year I have begun with the same and it has a positive effect in opening a more subjective, personal connection and awareness to the each student's standpoint on that particular day.

Julian Sleight, priest, counselor and author of several books on guidance, writes in his book, *Friends and Lovers; working through relationships*, the following: "We need to grow in consciousness if we are to become masters over the way we interact, for only then can we ensure that we do not hurt one another or generate conflict in our everyday existence" (1998 p. 25). He then goes on to explain three levels of relating and the need for this to be mutual and in balance between both parts. The levels are in the realms of thinking, feeling and willing. Each has its own characteristics. If my thoughts over-dominate the students' thoughts I risk confusion and squelching their self-esteem. If my feelings over-dominate students' feelings I risk putting them down and closing myself off from response. If my will acts too strongly over the students' will I risk causing suppression, enslavement or conflict (ibid. p. 27). A second quote that I feel especially relevant, and is natural to incorporate in a learning arena one finds on a farm, is: "However, the closest way of relating can be through deeds. We can converse and communicate through our thought-filled words; we can share how we feel with another through poetic speaking or through our gestures. But when we work together at something, and achieve results through our co-operation, that brings about the deepest relating. By working together we forge bonds" (ibid. p. 24-25).

Ragnvald Kvalsund's booklet, *"Oppmerksomhet og påvirkning i hjelperelasjoner"* (*Attention and influence in help-relationships*) (2009), devotes attention to relationship building skills. He mentions that both skills and attitudes play an important role in the outcome; for example, the act of listening is a technique but the intention one has while listening is an attitude. Intention has a moral quality and is decisive for the result of whether the listening has the objective of helping or manipulating (ibid. p. 5). He mentions two basic skills of developing a help-relationship: 1) to devote attention to the person(s) concerned in order to gain an understanding and ensure a positive, safe relationship, and 2) to then transfer over to the person encouragement, opportunity and strength to help themselves. Different techniques are discussed: passive and active listening, paraphrasing, voice quality in speaking, body language, reflection upon and communication of feelings, establishing of trust, etc. These are helpful tools and necessary skills to develop and use in the process of relationship-building throughout the time one has together.

By combining Sleight's advice on the closest way of relating being through deeds, and Kvalsund's suggestions about devoting attention to persons involved and then encouraging them to move in the direction of helping themselves, we then have an approach in which mutual attention coupled with activity can be a good way of developing the teacher/student relationship. Getting

to know the student, their abilities and interests, and then connecting them to fruitful learning situations in the vocation would be natural elements in this approach. The teacher then needs to learn and use methods to get to know the student, help them to better know themselves, have good insight into and didactical skills for utilizing learning landscapes that induce the educational situations beneficial for the student. Hugo's analysis in figure 1 depicts a holistic landscape of skills and competencies coupled with the student and his or her immediate relationships embedded within the extended community-in-context. What requirements and what learning theories are then involved in choosing and planning the activities to satisfy this approach?

### 2.3.3 Learning requirements

Though 'learning requirements' are not a specific learning theory it may be useful to insert these comments here because they are connecting points between the teacher, the student and a vocation or profession built upon knowledge, skills and competencies, both of general and specific nature. Qualifications in becoming a skilled tradesperson form guidelines out of which the teacher and the student operate. Learning requirements in the Norwegian school system build upon this general and specific nature for each line of study. The general syllabus is regulated at the national level and provides broad guidelines for the direction of study. The specific syllabus and subject curricula are developed and implemented at the individual school level, adapting the broad, national guidelines to the local geographic and site-specific qualities that encompass each school. They describe and create a reference point for the framework of skills and competences that the student should strive to attain competency in during the course of study. In addition to the vocational curriculum there are general criteria that emphasize development of oral, writing, reading, mathematical and digital skills.<sup>9</sup> At the national level a *Core Curriculum for primary, secondary and adult education in Norway*<sup>10</sup> formulates a statement of aims that focus on the development of essential characteristics of the spiritual, creative, working, liberally educated, social, environmentally aware and integrated human being. These aims "constitute a binding foundation for the development of separate curricula and subject syllabuses at the different levels of education – the common core for the Norwegian educational system." (Hernes 1997).

These guidelines provide a qualification framework out of which to develop a curriculum. A major question then for the teacher and student is how to adapt the guidelines into meaningful teaching situations. Are we to teach and learn for the examination, or are we to teach and learn for maintained motivation and progression adapted to the individual student? Herein come didactical and pedagogical skills into play, as well as the competency of creativity in finding

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<sup>9</sup> Curriculum for Vg2 in farming and gardening (Norwegian): <http://www.udir.no/kl06/LGA2-01/>

<sup>10</sup> Core curriculum: <http://www.udir.no/Stottemeny/English/Curriculum-in-English/Core-Curriculum-in-five-languages/>

appropriate learning landscapes. In this I focus back onto my thesis question: How, in cooperation with the student, can I, or student/teacher as team, develop meaningful learning situations that assist toward mastery of these competencies delineated by the vocation? In short, this query is asking, “where and how is this learning to take place?” I will first focus on “where?”

#### **2.3.4 Learning landscapes**

*Her er to Ord: det ene heder Theori og det andre Praxis, og det er godt at have dem begge to, og det ene er ikke noget uden det andet, men det siste er dog det bedste. Og det første Ord betyder at vide Aarsagen og Grunden i et arbejde, men det andet betyder at kunne gjøre Arbeidet, ligesom nu med en Myr. For der er mange som ved hvorledes de skal gjøre med en Myr, men gjør det galt alligevell, for de kan det ikke, Men mange kan det og ved det ikke, og saaledes kan det også blive galt, for der er mange Slags Myr. Men vi på Landbrugsskolen, vi lærer begge Ord.*

My translation: “Here are two words: the one is Theory and the other Praxis, and it is good to have them both, and the one is nothing without the other, but the last is best. And the first word means to know the reason and grounds for a work, while the other means ability to do the work, for example with marshland. For there are many who know how to handle marshland, but do it improperly anyway, because they do not know understand the land. But many know how yet do not know it, and in that way it can also be wrong because there are many types of marshland. But we at agriculture school, we learn both words.”

*(from En Glad Gutt, Bjørnstjerne Bjørnson. 1995. Quote is from Evensen (2005: s. 260))*

The word ‘landscape’ is metaphoric for the arena of practice in which learning takes place. In sections below diverse learning landscapes will be described. A common denominator in learning landscapes is that they are comprised of a network of relationships of learners at varying levels of development (Kvale and Nielsen 1999); they also form the peripheral reality encompassing the learning environment. The phenomenon of the landscape is of critical importance and need be explored in detail for its values towards providing potentially meaningful learning situations. Kvale and Nielsen make an allegory to the importance of understanding the phenomena and vulnerability of ecological systems in nature when they present their views about the inherent value of a community of practice in saying: “Be careful with placing new scholastic elements in an existing cultural landscape, before the inherent resources for learning have been explored and developed” (*Ibid.* p. 198). Zajonc (2009 p. 134) states: “Valuing the periphery becomes especially significant if... the universe itself is a place of agency, wisdom, and even moral guidance. If we are awake to the wide circle of reality around us, then its intelligence can join ours in ways that reach far beyond what we can imagine from our point-wise awareness.” This point is important regarding my research question because communities of practice have a diversity that students are searching for. In addition to institutionalized, scholastic learning they are looking for practice opportunities that are freed from that setting, where there is opportunity to discover the intricacies of what makes a farm work, in a real life setting (see appendix 4) with the farmer as master teacher instead of professional educators.

Saugstad (2003), as well as Nielsen and Kvale (2003) discuss strengths and weaknesses of school-based and practice-based learning. They conclude by encouraging an attitude of understanding and to utilize the strengths of both, as opposed to favoring the one over the other. Saugstad emphasizes different forms of knowledge that can be mediated in both learning arenas, and she refers to Aristotle’s descriptions of the differences between theoretical and practical knowledge and the types of settings that these knowledge forms can best be mediated and attained. Theoretical knowledge is based on *“knowledge that is certain, exact, timeless, unchangeable and scientific...”* while practical knowledge *“is based on changing circumstances, human intervention, chance. It is dependent on context and is somewhat unpredictable”* (Saugstad 2003 p. 315, my translation). While mediating theoretic knowledge is at ‘home’ in school-based education, attainment of practical knowledge need be situated in the context in which it will be applied. Saugstad calls theoretic knowledge-attainment as being spectator oriented and practical knowledge-attainment as participatory oriented. Both are necessary in order to acquire the technical and social skills of the trade, coupled with an epistemological understanding and general knowledge of the field of study.

| <b>What the school can give the students</b>                           | <b>What the trade can give the students</b>                        |
|--|--|
| A broad introduction in the subject’s general knowledge.               | Practicing routines and a ‘feeling’ for the profession             |
| Time for specialization and reflection over a particular subject       | Real responsibility for a production                               |
| Time and room for explanation  | Professional role models   |
| Reflection over the learner’s work experiences                         | Epistemological and technical achievements                         |
| Adherence to mediating marginal techniques and skills in the vocation. | Identification with and establishment of network of professionals. |

**Figure 2. 2: Strengths of school and practice-based training opportunities (Nielsen and Kvale 2003 pp. 329-331).**

In pursuing these thoughts further Nielsen and Kvale have listed the strengths of both forms of learning, depicted in the table above. The conclusion Nielsen, Kvale and Saugstad suggest is to strengthen the cooperation and integration of these two arenas. They also come with a warning that it is important to allow the workplace to be a workplace, and not impose pedagogical demands on the masters teaching the trade. Allow the apprentice to experience the practical landscape as it is in its real context; otherwise learning possibilities connected to the practice will weaken in value (Saugstad 2003 p. 320). This brings back to mind the importance of developing an understanding of and respect for the ecological systems of each learning landscape before imposing inappropriate approaches upon one another.

### **2.3.5 Communities of Practice: School-based and Farm-based Training**

According to Schön and Dreyfus and Dreyfus (Hiim and Hippe 2001) it is of value for the student to be able to experience learning through *“reflected practice”*. This practice should be organized



in a safe environment, in which the *“students can be relatively free to experiment, learn from each other and receive systematic demonstration, instruction and supervision from competent masters that are proficient in both the profession and in principles of teaching* (Ibid. p. 69). In addition to acquisition of vocational skills in a practice fellowship it is not only the isolated skills of the craft that are essential towards becoming a master; it is also of value and necessity to develop social skills and identity to the community in which one partakes.

Lave and Wenger develop these ideas in their theory regarding situated learning. In referring back to Hugo’s analysis in figure 1 one can say that this realm of learning is taking place in zone C, the site. In the site learning is taking place via a ‘legitimate peripheral participation’, meaning that the learning is organized in fellowship within the community of practice with the learner as partaker (Nielsen and Kvale 1999 p. 22). This form of community in which a member, for example the student, is enmeshed, creates ample opportunities for learning at many different levels, both socially and professionally. *“Mastery of competence needs be demonstrated within a situated context”* (Hugo 2012 p. 7). In school-based agriculture education this would be exemplified by practice sessions, practice placements on real farms, classroom teaching and social life during and after school hours. During school-hours teachers collectively and individually would have the coordinating role, preferably in close cooperation with the student. In a farm-based training one would have the farmer, the farm, the people directly involved with the farm and the connected community surrounding the farm comprising the ‘community of practice’. In this case the responsible farmer/mentor would have a coordinating role, in close cooperation with the apprentice. If there were a collaborative school-based or seminar/farm-based education, as in the BINGN initiative, a designated coordinator would be necessary to oversee the content and organizing (see footnote 9) at the general level, and in cooperation with the farms and their apprentices at a specific level.

What distinguishes a ‘community of practice’ from a group of individuals sharing interests is described in Etienne Wenger’s introductory article, *Communities of Practice. A brief introduction* (Wenger 2012). Wenger defines three crucial elements that characterize such communities as distinct from casual groups:

- 1) The domain. A community of practice *“has an identity defined by a shared domain of interest. Membership therefore implies a commitment to the domain, and therefore a shared competence that distinguishes members from other people...”* (op. cit.).
- 2) The community. *“In pursuing their interest in their domain, members engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other”* (op. cit.).
- 3) The practice. *“A community of practice is not merely a community of interest... Members of a community of practice are practitioners. They develop a shared repertoire of resources:*

*experiences, stories, tools, ways of addressing recurring problems – in short a shared practice. This takes time and sustained interaction” (op. cit.) (Smith 2003, 2009 p. 3).*

In terms of reality for my own working situation the most immediate community of practice ‘domain’ would be Sogn Jord- og Hagebruksskule, with its vision, mandate, statutes and staff and students committed towards providing and receiving a practical and theoretically sound education for future farmers and gardeners in ecological agriculture. The ‘community’ would be the members (staff, students and other participants in connection with one another) building relationships towards furthering the aims of the ‘domain’. The ‘practice’ represents the shared resources of all of the individuals involved, with their skills, figurative and literal tools, and experiences working in a continuum of interaction throughout the school year and the growing seasons.

In terms of my thesis question the ‘community of practice’ would be the site or arena that I would be directing my focus regarding how to help the student to progress into their own future of mastering what is important for them to develop. They would be assisted along the way in identifying their interests. They would be helped in the process, more intensely in the initial phases, and to a lesser degree as their capabilities enabled them increasing independence. After identifying what they wish to develop my role would be to assist them into appropriate opportunities, from which they could learn important skills, knowledge and competences.

#### **2.3.6 School-based community of practice and learning**

Though my research question has a focus on the student as primary subject, the student, teacher and school are cooperating in community, in conscious effort, within an educational framework directed by both national and local regulations and competency criteria (Utdanningsdepartementet 2). Most often the student has chosen to come to the school through an inner motivation. They have established a willed connection and have expectations that they can gain important knowledge, skills and competences in ecological farming and gardening. Here they meet other students, each with their own inner motivations and expectations. Collectively they meet a faculty and an institution, each with their own individual and collective attributes in varying levels of adaptability to what the students are bringing into the community. There is a balance point, which needs to be acknowledged both from the sides of the student and the school. On the one side, if the student loses their motivation, because of strict, predefined expectations carried by faculty or institution, then learning will be minimalized and the student will choose to find another setting in which to pursue their interest. On the other hand, if the student has unrealistic expectations towards the school or faculty members then the balance tips in the other direction. This is one good reason for early, individual contact both through conversation and activity.

In this school-based setting that falls in under the upper secondary public school system certain qualification requirements make it demotivating for students who are tired of “school-system learning”. Typical for these students is that they are not interested in participating in subjects or

lessons not relating specifically to the acquiring of practical skills of the trade. For these individuals a farm-based education might be a more appropriate setting.

### **2.3.7 Farm-based community of practice and learning**

Regarding learning theories for farm-based education much of what has and will be discussed is similar to the public school-based, or combination school and farm-based education. An essential difference, however, is the framework around certification and governmental requirements, for example the stipulation to include language and social studies as compulsory subjects. Farm-based education would stand freer of the ramifications of regulations governing school-based programs. The psychological, sociological and philosophical ideas and principles would apply equally in both settings. A farm-based education would offer more practical work, experience of the routines of farming; enable a stronger identity with and responsibility for the productions and have close contact with professional role models. In some situations the exposure to more updated technologies in farming would be possible because many schools do not have the funding to be able to keep up with new innovations. The opposite can, however, be true; that the apprentice may be hindered in their learning (this can be useful learning in itself) for diverse reasons. Many scenarios are possible and an important responsibility for the organizers of farm-based training is to screen and carefully select farms that can then be included in a collaborative network and training system, as is the case with BINGN and NABDAP.

In my opinion the farm-based educator would absolutely have benefits of becoming familiar with the syllabus and curriculum in agronomy developed both at the national level and then freely adapt them to what could be feasible on his or her specific farm. This is one of the values of the checklists that NABDAP (see footnote 8) has published and uses in their apprentice-training program, and that I have adapted with permission to the Norwegian setting (appendix 5).

## **2.5 How are we to learn?**

In this section I will explore learning theories that have both been of inspiration and assistance in my own development, and that also are relevant to the thesis question as to how to develop motivating and meaningful learning situations in cooperation with the student. Relationship building, discussed above, is especially important in the early phases of establishing a trustful and a secure atmosphere within the learning landscape. There are a number of other central theories that form a framework surrounding the didactics of learning. They are these that will be illuminated here. Many of them evolve historically upon others, making it very comprehensive to go in depth in theory analysis and genesis. I choose therefore to go into some depth on theories relevant to the thesis, as I have learned to know and use them during the past two years. These theories will later be reflected upon in my empirical discussions.

### 2.5.1 Activating the whole

By 'activating the whole' is meant that the human being's nature, beyond being a physical, living organism, is comprised of qualities that need a balanced development in order for the person to realize his or her full potential. Krogh (2012) develops this viewpoint in an educational perspective in his article *Menneskets væremåte (The Human's way of Being)*, and emphasizes those three aspects of the human being: feeling, willing and thinking, which need to be stimulated for balanced development. He describes that these human elements have been recognized as essential and developed by numerous thinkers and researchers such as Benjamin Bloom, Aaron Antonovsky and Rudolf Steiner. Bloom's taxonomy of learning places the order of priority in schooling or learning to be: thinking, willing and feeling. This, according to Krogh, has been the dominating approach to education for several decades (Ibid. pp. 4-5). In reflecting on this one could say that acquisition of objective knowledge is the priority, succeeded by the capacity to act and handle skillfully, and followed at last by the development of a personal bonding, motivation, 'feeling' for the situation and empathy for the surrounding environment.

Parker Palmer (2001) adds an interesting and supporting angle. In a lecture entitled, *The Violence of our Knowledge – On Higher Education and Peace Making*, he speaks of dangers of the 'objectification' of knowledge and the absence of imbuing empathy for or living into the phenomenon of what we are learning. He refers to Michael Polanyi making "*the case that if we did not 'indwell' the very phenomenon, about whose phenomenon we are fascinated, we would have no way of coming to knowledge about that world*" (Ibid p. 13). To indwell means 'to live into', and this involves the nature of associating, connecting or bonding. The danger of objectifying and placing knowledge as alpha and omega over empathy is that it can quickly lead to inappropriate use of technology or ideology, for example the poisoning of the environment with pesticides or the eradication of ethnic groups in war situations. Parker suggests paying attention to the division between mind and heart and to "*link academic learning to practical community experience*" (Ibid. p 21). This suggests to me the importance, early in the learning process, of engaging the student's capacity for connecting at an empathetic level to the subject.

Antonovsky, whom will be elaborated upon later, places emphasis on a different order than Bloom's in this learning taxonomy. He experienced through his psychological health-related research that that which enables people to best tackle stressful situations, and to have a positive relationship to the context in which they are in, is if they can find meaning (feeling), understanding (thinking) and manageability (willing) in the situation that they face. He places meaningfulness as the most important of these foundational pillars (ibid. p. 5). This would rearrange Bloom's learning-taxonomy placing the attribute of 'feeling', 'connecting' or 'bonding' as a priority.

In this regard, and through Krogh's experiences with education (Ibid. p. 4), he proposes a learning taxonomy illustrated in the table below.

| Qualities                                 | Original condition | Developed quality                | Formative possibilities           |
|---|--------------------|----------------------------------|-----------------------------------|
| Associate, bond, connect                  | Feeling            | Compassion                       | Empathy/identify with others      |
| Directing the will towards concrete goals | Willing            | Determination, motivation        | Personality, integrity, fortitude |
| Exceed, go beyond, initiate anew          | Thinking           | Reason, sensibility, responsible | Intuitive recognition             |

Figure 2.5.1: Sequential taxonomy of learning relationships based on human characteristics and learning development (Krogh 2012 p. 4)

This model is developed further together with Linda Jolly (Krogh and Jolly 2013) and they describe that the learner's movement through a forming process begins at the upper left and moves gradually to the right and downward through the table. The degree of levels achieved would be dependent on the student's starting point, capabilities and progress underway (ibid p. 42).

If this taxonomy model is to be put into practice, then it will put a new emphasis on organizing educational situations. Rather than stimulating the thinking, knowledge seeking aspect of the human being, the model indicates that the condition of 'being connected' is the grounding point for initiating good learning. If the student has feeling for the learning situation then the rest will, if facilitated, follow after with the student learning through handling (will) and reflection (thinking). Their curiosity will be a driving force towards forming a foundation and motivation for learning theoretical aspects.

Reflecting back to the introduction and particularly the interviews/conversations I had with Hugh Williams and Peter Escher, in which Hugh said, *"it's not the teaching, but rather the learning that is essential; and essential for learning is to be motivated, and for that to happen one has to be connected to what one wants to learn!"* and when I asked in the early 80's for advice as to how to learn biodynamic farming Peter simply said, *"Do it!"* (p. 11 above). Experiences from my own learning and reflections on successful teaching situations confirm this approach; unless the student is 'there' or 'connected in spirit' then it's hard to find a hammer large enough to get the knowledge into their heads and hands.

### 2.5.2 Didactic principles in vocational education

Vocational didactics build upon a relationship to and learning about real phenomena that a student is to meet, and the teacher is to serve as guide (Gjøtterud & Krogh 2008 p. 26). From a teacher's perspective it is crucial to organize and arrange for meaningful and relevant learning situations for their students or pupils. This would apply as well to a farmer or gardener with responsibility for teaching apprentices. The following five principles offer guidelines for organizing learning situations (Krogh and Gjøtterud 2008). These principles are applicable to any vocational education; the trade and learning facility determines the content. In relating to

the thesis question these are relevant in that they present principles the teacher can use in guiding his or her student forward towards mastering.

*Principle 1. Direct experience with the phenomenon*

The first principle is that direct experience involves the learner at emotional, physical and cognitive levels. Social interaction is also involved the moment the individual joins in with others. Direct contact with subject matter or phenomenon connects the learner through experience, exercises several senses, thus opening for a more personal relationship to the situation than learning processes based on predominantly cognitive stimulation. Grenstad (1986), in his book about learning through discovery, emphasizes that involvement of several senses creates a good foundation for learning. This viewpoint is supported by Howard Gardner who is known for his theories on the human being having multiple intelligences, and that each individual has particular senses through which they learn best (Smith 2002, 2008). The social aspect of learning is well illustrated by Vygotsky's (Mjelde 2002) and Wenger's (1998) ideas about learning in community, through social interaction with others, increases the specter of input for reflection and discussion.

*Principle 2: Learning through practice*

The second principle is that of learning through practice. This does not mean that theory is neglected. In learning through practice one has a direct meeting with reality, creating real connecting points onto which cognitive learning can build deeper understanding. Practice enables one's own genius or creativity to emerge through direct meeting of new situations to which there are not necessarily prescribed resolves. Aksel Hugo argues for this in his article on *Being and Becoming a Genuine Teacher* in which he states that, "*it is precisely through this process of living in the unresolved...(where) you have the condition for the development of your way of being, your style of acting*" (2012 p. 8). Students can and hopefully will seek for this opportunity on their own, but the teacher does well to incorporate elements of this "*living in the unresolved*" in the forming of learning situations so that the student must meet their inner self and ask, "*okay, what do I do now?*" Grenstad (1986 p.136) also states: "*Experience gives more than just an audio-visual stimulation, it involves the whole person's being at close hand.*" (my translation).

Through repetitive cycles of practice and reflection the student will come into a spiraling form of learning, rising from lower to higher levels of ability and awareness. Each new level of achievement creates a scaffold upon which to build the next. The psychologist Jerome Bruner developed this term (Mjelde 2002 p. 57) and, working out of a cognitive constructivist viewpoint, stated that, "*a curriculum as it develops should revisit basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them*" (Bruner 1960 p. 13: in Smith 2002). Albert Bandura meant that for authentic mastery, assignment tasks need to be rooted in reality and that the people most suitable for teaching are skilled tradesmen, role models and counselors (Manger 2011). Dreyfus and Dreyfus speak about mastery

developing through five stages from novice to expert (Hiim and Hippe 2001). I have written in greater detail about Bandura, Vygotsky and the Dreyfus brothers in the sections below.

#### *Principle 3: Learning through example*

A third didactic principle is that of learning through example. The idea here is that one chooses a project that includes many elements central to what the student or apprentice should learn. In a school-based education, this would be directly related to both a subject curriculum and core human values curriculum. Ideally the student would work together with their class teacher to customize as much as possible towards his or her own specific interest. A farm-based education lacking a curriculum could utilize a skills checklist (appendix 5) or just be built up around a mutual agreement between apprentice and mentor. In exemplary learning students find it most motivating to have a meaningful task relevant to an immediate need, yet simultaneously having a long-range perspective (Gjøtterud & Krogh 2008 p. 21). Otto Scharmer also mentions this as an important technique when working towards a future goal, that one creates a small-scale prototype that embraces core elements of a long-sighted vision of what one wishes to learn or achieve (Scharmer 2007 p. 417).

#### *Principle 4: Problem-based learning*

Principle four in this list focuses on problem solving. Asking questions relevant to a student's interests creates a motivating foundation for the student to become engaged. By asking the student to analyze professional and humanistic qualifications embraced by this problem motivates at a deeper level because they involve their own feelings, knowledge and opinions in the case. Here one can use the model illustrated by Strangstadstuen (figure 5.1, p. 62) as a strategy from which they can work. To be most meaningful for the student it is suggested that the task be as holistic and relevant as possible, otherwise a superficial relationship to the assignment can occur and little learning will take place (Gjøtterud and Krogh 2008 p. 23).

#### *Principle 5: Inductive and deductive approaches to learning*

An inductive approach to learning is a fifth didactic principle. By this is meant that the starting point for a learning situation is through practice as opposed to a factual and theoretical discourse, or deductive approach. The teacher needs to evaluate to what degree the student needs preliminary theoretical explanations prior to initiating a task, but the gist of an early practical engagement is that the experience will stimulate many senses, questions will arise from the learner and a self-lived curiosity will create a better foundation from which theory can deepen their knowledge (ibid).

#### **2.5.3 Mastery strategies:**





This section focuses particularly on theories that are relevant for helping a teacher in developing their skills in creating motivating and meaningful learning situations. Mastering skills of a trade comes through hard, devoted work over time. Trial and error are an important aspect of this

work, and finding a connection to, motivation for and will to delve deep into the learning process is usually combined with being connected to socio-cultural arena of role models, teachers, colleagues and an extended community. In the spirit of this I would like to describe some key ideas or theories from scholars that are particularly relevant. Of them are Aaron Antonovsky, Lev Vygotsky, Albert Bandura and Mihalyi Csikszentmihalyi quite central in their contributions to my thesis question.

### 2.5.3.1 Antonovsky and sense of coherence

Aaron Antonovsky (1923 – 94) had a professional life as medical sociologist and worked with concepts concerning the relationships between health, stress and well-being (Jensen and Johnsen 2005). Of particular interest to him was to find an explanation for what enables some people to remain healthy despite stressors that often cause psychological disability or even physical illness. His focus on health-causing factors, as opposed to those that cause illness, led to coining of the term ‘*salutogenesis*’. A metaphor he has used is: What is it that enables people to ‘be able to swim’ when the going gets tough, as opposed to drowning or having to be saved by others (Ibid. 86)? His studies led him to discover that those who remain healthy have the ability to ‘see and understand’ a stressful situation and act in a way to face, take control and hinder stress factors from taking overhand.

His work led him to defining characteristics and components that lead a person to being able to handle challenging situations as being of a nature that give the individual a “sense of coherence” about life and its challenges (Antonovsky 2014). Antonovsky defines this “sense of coherence” as follows (my translation): *“The sense of coherence is a encompassing attitude that expresses the degree that a person has a comprehensive feeling of trust that 1) the stimuli one receives from the outer and inner world throughout life, is structured, predictable and comprehensible, 2) that the resources that are necessary to enable one to meet the demands at present are available, and 3) that these demands are challenging and worth investing and engaging oneself in”* (Jensen and Johnsen 2005 p. 88). To summarize the essential elements enabling one to handle and find coherence in challenging situation is that the situation is experienced as: understandable, manageable and meaningful.

| <b>Learning processes</b> |  | <b>Experience of connection/<br/>Sense of coherence</b> |
|---------------------------|---|---|
| Foreseeability            |  | Understandable  |
| Balance of challenge      |  | Manageable  |
| Involvement               |  | Meaningful  |

**Figure 2.5.2: Antonovsky’s model of relationship between the character of learning processes and learner’s experience of connection to the situation (Jensen & Johnsen 2005 p. 89)**

How can this understanding be useful in creating positive learning situations? My own approach to organizing a teaching situation in the realm of predictability would involve ensuring that the student comprehends and understands what the situation is demanding of them. Balance of



challenge: that the student believes that he or she has sufficient skills and competency to be able to manage the situation. Involvement: that the student sees the learning situation as relevant, timely and worth engaging in. If these three conditions are satisfied, and as my experience confirms that it may take negotiating and compromises to achieve, then it will result in the student connecting to the task with an inner drive to participate and learn. This is illustrated in the case study described below, and brings me to another theory about qualities of ‘being connected’ or having a ‘feeling of coherence’ in one’s work.

### 2.5.3.2 Csikszentmihalyi and state of flow

Mihalyi Csikszentmihalyi is a psychologist of merit and is best noted for his studies on happiness, creativity and the concept of the state of ‘flow’. This means that one becomes involved in an activity to such a degree that one is completely absorbed and that little else seems to matter (Csikszentmihalyi 1990). Csikszentmihalyi has written extensively about mental states that can be experienced in terms of the balance between challenge and skill facing an individual. Depending on their level of skills a situation that presents itself can bring about feelings ranging from apathy, boredom, worry and anxiety to relaxation, control, arousal and ‘flow’ (Ibid.). He attributes to the occurrence of the state of flow that there is a balance for the individual person between the level of challenge and the level of skill the individual possesses in meeting the challenge.

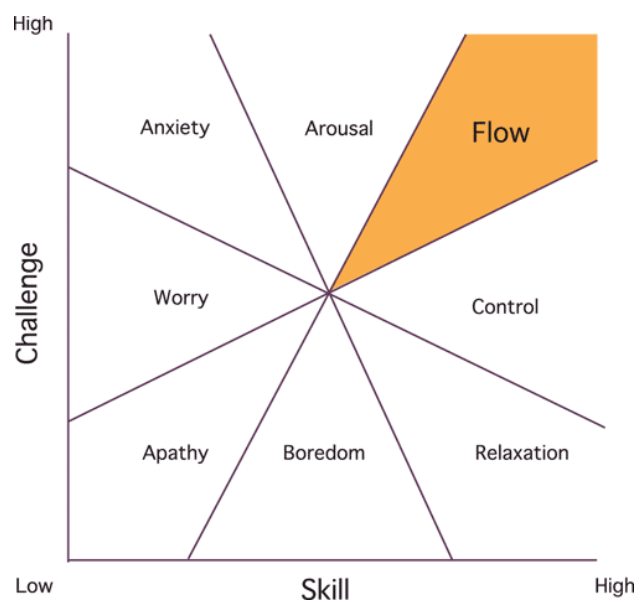


Figure 2.5.3: Csikszentmihalyi’s flow model (Wikipedia; Csikszentmihalyi 2014)

I experience this theory as being supportive to Antonovsky’s theory on salutogenesis in that, when in the state of flow, one experiences connectedness, and meaning and understanding of the situation one is in, and the ability to manage the tasks at hand. In the case of situations that are too challenging for the person concerned they will experience anxiety, arousal and worry. If the individual has higher levels of skill than the task demands they will at best feel full control, but may relax, perform below their level of ability, be bored and apathetic. As teacher I experience that students are in the ‘flow’ when they stop looking at the clock, work in focus,

interact eagerly and seem fulfilled. When students reflect the state of flow, or of full focus, then it is natural for me to get into flow status in my teaching, at times leading to not hearing the bell signaling recess. Achieving this is a wonderful experience and worth striving for, and in my experience it is most easily achieved in one-to-one and small, interest-group projects. In large class settings, to engage all students such that they enter a state of flow is a challenge and requires good planning, knowing one's subject matter well, knowing one's students, and creating space for the students to be able to work on their own or in smaller groups.

Knowing that meaningful learning situations arise when one is in the flow, then creating opportunities for this occurrence should be part of the teacher's repertoire of skills. The students should be enabled to explore something that is for them meaningful and challenges their skill level to a manageable degree. The adage, "*a picture says a thousand words*", is applicable to a well-chosen activity that '*embraces a thousand possibilities from which to grow.*' Parker Palmer calls this "*teaching from the microcosm*", and goes on to say, "*...it's possible to pick that representative 'grain of sand', which entered deeply into and deeply understood, gives the student the lenses, perspectives, skills and tools to understand most other parts of that field*" (Palmer 2001 p. 28). It is a joy when one as teacher experiences students in the flow of their work. An example of this is illustrated in the case study below. In creating a challenge towards which student can stretch themselves brings me to a next useful theory developed by Lev Vygotsky.

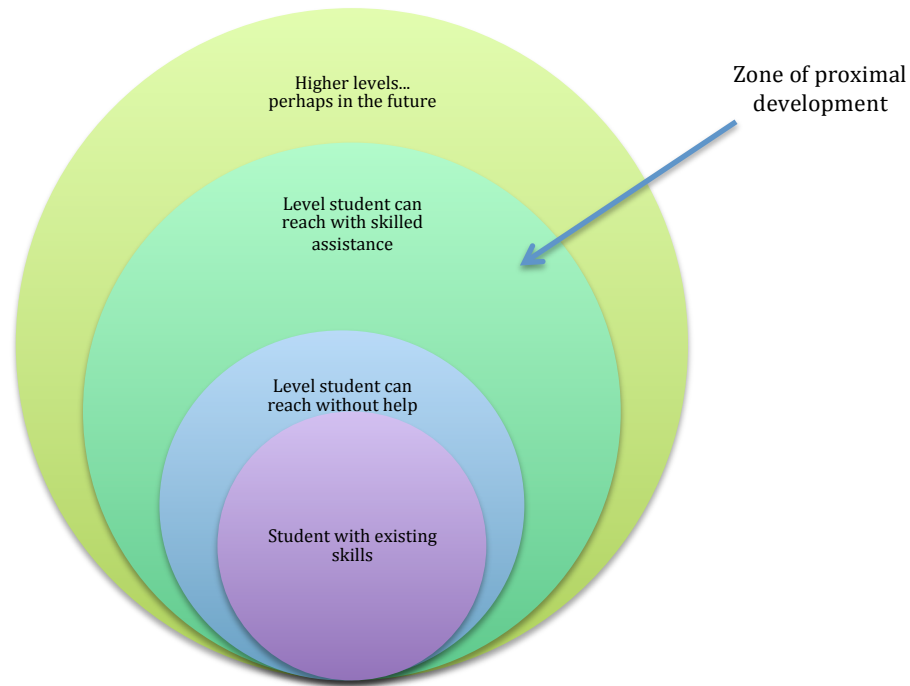
### **2.5.3.3 Vygotsky and zone of proximal development**

*"Anything you can do, and all that you can dream you can do, you should begin. In boldness live genius, potential and brilliance."* J. W. Goethe

Lev Vygotsky (1896-1934) was a developmental psychologist and provided significant contributions to social-cognitive theories about the relation between learning and development. He was particularly concerned with the idea that individual learning happens through a social process. In the social process there is dialectic exchange between that which the learner 'makes sense of' and internalizes from inductive experiences and the challenges and demands for new skills that the learner 'learns the meaning of' from encountering deductive instruction from professional and everyday life (Mjelde 2002 p. 56-57). The span between that which is internalized development and that that is attainable for learning through social interaction and exposure to real life situations, called Vygotsky the 'zone of proximal development' (ZPD) (Ibid.) (see figure 2.5.4).

Vygotsky emphasized the importance of a 'mediating helper', a teacher or skilled helper, consciously assisting this process (Imsen 2006 p. 258). Without assistance the learner can definitely advance in development, but with assistance can advance even further. Direction and meaning of life is transmitted through the word or language. A simple example is my reference earlier to Peter Escher's simple, but deeply effective comment to me when I asked him how to

become a skilled biodynamic farmer. His response, “Do it,” was one of the last words he said to me before his passing away. Though he wasn’t there to further mediate learning experiences, others were, and his statement has lived in me since. This was but a quick statement that, for me at the time, carried much wisdom. Direction and guidance through conversation and dialog between mentor and learner can be invaluable in opening horizons for the student on their way.



**Figure 2.5.4: Illustration of Vygotsky’s theory of ‘zone of proximal development’.**

Vygotsky also meant that language, the use of speech and the use of professional terminology to explain the spontaneous terminology used by individuals with a lower level of development, is a very important learning tool. Examples of this would be learning the Latin terms for the Norwegian names of vegetables and herbs if one wishes to order seed from international catalogues, or knowing the names and differences between a manure fork, spading fork, hayfork or broad fork and then using the right tool for the appropriate situation.

A term used in connection with the ZPD, though not coined by Vygotsky, is ‘scaffolding’. Cognitive psychologist, Jerome Bruner, introduced the theory in the 1950’s, and by this is meant that one builds upon previous knowledge and abilities; that they create the foundation for further learning. The mediating helper would have the role of evaluating the learner’s abilities and guiding the learner in the degree necessary towards progression. In the starting phases with a new beginner the teacher, mentor or skilled helper would be highly visible and/or available to guide and instruct. As the level of skills and competencies increase the mediator can gradually withdraw, allowing the learner a greater freedom of responsibility for their own learning (Mjelde 2002 p 58).

Another central point important for Vygotsky was the value of holistic as opposed to atomistic teaching. If subjects are taken out of their natural relationship to real phenomenon and isolated from one another then it is difficult for the learner to see the connection between what they are learning and for what they can use this newly attained knowledge. Tiller mentions in his book *Den andre dagen* (The Other Day) that, “*It radiates from students in the auditorium when life’s experiences and scholastic knowledge meet*” ((2002 p. 24), my translation). In similarity to the theory above of Antonovsky and ideas presented by Parker Palmer (2001), Vygotsky expresses the importance of creating meaningful learning situations to which the student can relate to larger perspectives.

I see these ideas as very useful regarding my thesis question as to how, in cooperation with the student, to create meaningful learning situations. Understanding the student’s level of development requires relationship building and mapping the student’s existing abilities and potential for learning. From this understanding the teacher can better tailor learning situations to the student’s potential for development and better ensure that the student will have motivating opportunities for learning. As an apprentice host or farm-based educator this would also be a helpful approach towards meeting the apprentice and working towards a fruitful experience. From the learner’s standpoint choosing a ‘skillful mediator’ or teacher will be decisive. This brings me further to Albert Bandura and his theory of learning through observation and imitation.

#### **2.5.3.4 Albert Bandura and learning through observation and imitation**

Albert Bandura (1925-) is also a highly recognized psychologist and amongst other contributions he is well known for designing a social-cognitive learning theory based on learning through observation and imitation (Imsen 2006). He refers to four points in the process of learning through observation: 1) observation; 2) memory; 3) imitation, and 4) motivation (Ibid. p.137). Through observation one sees how and what is being done. The ‘doer’ becomes a role model, regardless of skill level. The memory of this will activate internal processes that the learner can use further in developing skills independently. Perhaps more observation is necessary, perhaps another approach, for example reading, is what is needed to make the next progression. The next step is imitation based on impressions and based on one’s own abilities. Bandura emphasizes that the learner in the imitation phase must use cognitive organizing of stages of procedure before acting. Correction underway will be a part of the process and here one can benefit from Donald Schön’s theory on reflecting in and upon practice (Schön 2011). Reflecting upon the result will bring motivation to either continue, to change one’s approach or behavior, or perhaps even to go in another direction altogether.

Cognitive abilities are important for learning through observation. Being able to form an impression of what it is one wishes to achieve, to remember details of what one saw in the role model’s performance, to derive conclusions and preconceive consequences of one’s actions all

demand a degree of maturity. Maturity varies, and again, the importance of ‘knowing the student’ comes into play. Not only knowing the student, but also knowing a variety of teaching approaches and learning styles are important tools for the teacher to master. From here I would like to approach another realm of learning theory that explores the cyclical process towards mastering that “*combines experience, perception, cognition and behavior*” (Kolb 2000 p. 48).

#### **2.5.3.5 Experience-based learning theories**

As I mentioned in the introduction on page 9, Jean Jacques Rousseau and John Dewey were educators that first inspired me about values of experiential education. Rousseau dates back to the mid-1700s and was an advocate of educating the whole person, that is, character, moral qualities as well as cognitive aspects (Wikipedia; Rousseau 2014). I choose not to spend time elaborating on Rousseau and rather go further to more recent ideas and contributors of whom I have become familiar. David Kolb’s article on experience-based learning processes (Kolb 2000) gives an overview of Dewey (learning by doing and reflection), Lewin (action research, explained below) and Piaget’s (cognitive constructionism) contributions. Krogh and Jolly (2012) have synthesized these ideas further into a model called ‘relationship-based experiential learning’. This model I have found very useful both as a planning tool for teaching and also as a tool for students to use in their own planning of activities.

The model below (figure 2.5.5) describes interrelated outer and inner cycles. The outer cycle represents the stages and process of movement through practical aspects of a task: initiating activity, executing the task, achieving results and making eventual further plans. The inner loop represents the learning processes that the student experiences in relationship to the tasks and stages they meet underway. This model binds together many of the learning theories that I have described as relevant to my thesis question: Antonovsky’s ideas of sense of connecting, understanding, finding meaning and manageability; Csikszentmihalyi’s ideas of finding a balanced relationship between challenge and skills; Vygotsky’s ideas on movement through learning processes and stretching towards new limits, the zone of proximal development; and Bruner’s and Bandura’s ideas on scaffolding, and learning through observation and imitation. All of this is happening in this cyclical movement, which is also similar to the process in action research where the participants go through repeating cycles of outer activities juxtaposed to inner involvement and learning processes.

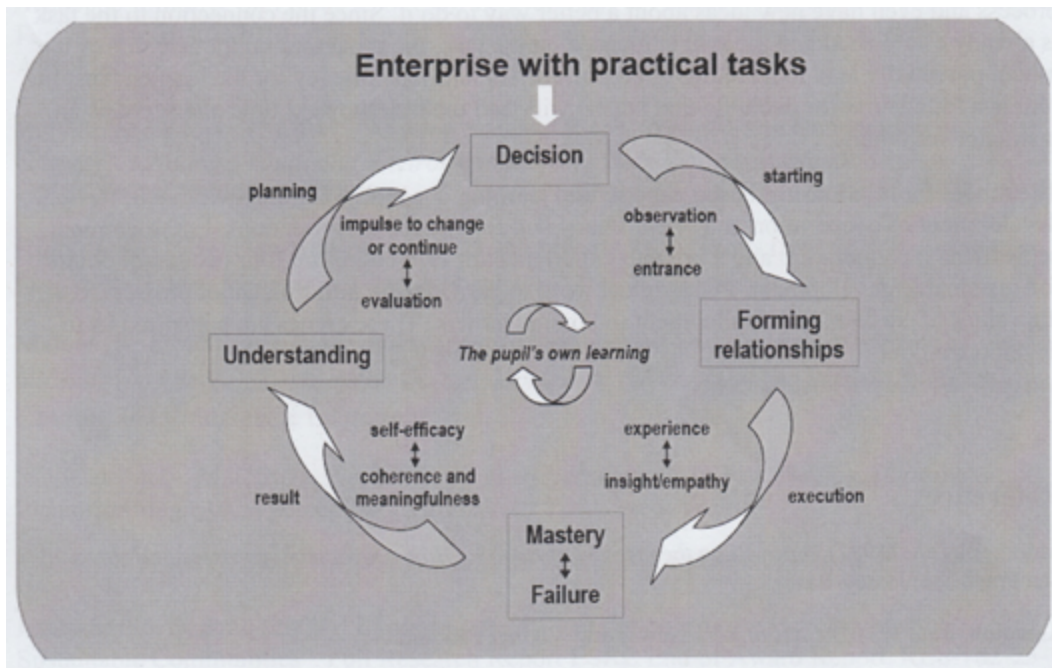
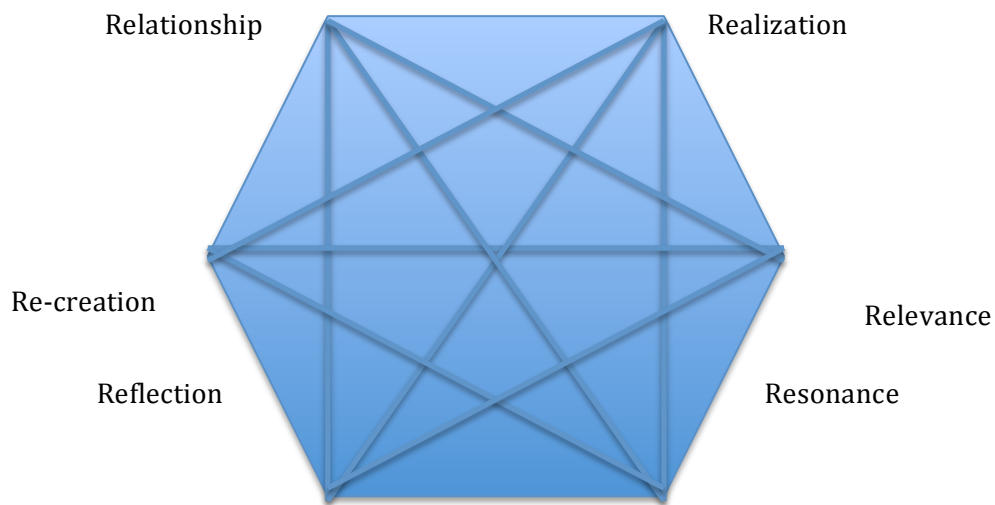


Figure 2.5.5: Illustration of model for relationship-based experiential learning described by Linda Jolly and Erling Krogh (2012).

The model in figure 2.5.6 below illustrates six “R” points as ways that learning occurs through experience (Krogh and Jolly 2012). Beginning with the three “R” points of relationship, realization and relevance are areas of experience that occur in the starting phases of meeting and working with a task. These points are in tune with the beginning phases of the relationship-based experiential learning cycle described above where the practitioner/learner develops a relationship to a task that is hopefully of relevance to their interests and realizable to a degree that they can achieve a satisfactory degree of mastery. Whether or not this occurs will have importance in what decisions follow in the reflection phase.

The reflection process can occur either simultaneously during (reflection in) or after (reflection over) the act of realization. According to Donald Schön, reflection in-and-over handling is an important process both in the development of professional competency and in the ability to use discretion regarding future choice of action (Hiim and Hippe 2001 p.64-71). This reflection is performed as an internal process that the practitioners do themselves and/or as a more external, social process through dialog or discussion together with others. An example of this in a teaching situation might be working with an apprentice in adjusting a piece of cultivating equipment and talking through what one is doing and trying to achieve simultaneously as it is being done. Brothers Dreyfus and Dreyfus also emphasize the importance of participation in real vocational settings coupled with opportunity for reflective discussion, especially with *“colleagues that have developed expert (or higher level of) competency”* (Ibid. p. 62). Through reflecting in and over activity one remembers and evaluates potential for improvement, and when done in fellowship with others, enables the practitioner to verbalize concepts and experiences to others. This is also an important learning process, as indicated by, amongst

others, Vygotsky in his discussions about language and mediating (Imsen 2006 and Krogh and Jolly 2012).



**Figure 2.5.6: Relationship model for inner learning processes in experiential learning. Based on model described by Krogh and Jolly (2012 p. 11)**

The aspect of 'resonance' regards an intuitive, inner awareness one experiences that stimulates a reaction without first having engaged in a conscious reflection process. Csikszentmihalyi's concept of being 'in the flow', where one loses sense of time because of a total immersion in an activity, for me, reflects what 'resonance' creates as a reaction. I would also say that what one's 'gut feeling' is about an activity would represent the resonance one experiences, and that this can be either a positive, harmonic or negative, disharmonic reaction. The result of the resonance can, without having to verbalize, be sufficient to engage or disengage the learner from the activity at hand. Regarding learning, and regarding the teacher's role in forming learning experiences for his or her students, this can be an important aspect to create 'room' for the learner to meet; a task in which they meet activity that can open up for their own intuitive engagement (Krogh and Jolly 2012). Hugo (2012) speaks of this when he discusses the importance of not having all learning be defined; that one has to allow room for one's own genius to emerge through an inner intuition and listening to one's inner grasp of a situation, without it having to be verbalized.

The 're-creation' aspect would occur when the next opportunity arises in which the learner needs the same or related skills and competencies. Here is where the ability to evaluate, think through and initiate change can be exercised. Here is where, according to Krogh's learning taxonomic model in figure 2.5.1., the learner moves downward and to the right in their development towards mastery. In a vocational didactics setting the practitioner would be moving towards being more able to lead an activity for others, create work opportunities for themselves and others; in other words be more capable to take on responsibility and autonomy.

These 'R' points represent parts of the learning experience, parts of a whole. According to the authors that describe this model, it is not a necessity for the learner to realize all of them in each learning situation, and the teacher need not organize learning situations to meet the demands of each point. Yet, the more points that are incurred the stronger will be reinforcement of the learning process; several experiential angles will be induced, and one often leads to another. Coming out of the classroom and into the realm of activity in relevant, real life situations will increase the chances for many of these points to be touched upon.

#### **2.5.3.6 Dreyfus and Dreyfus**

Another theory providing insight on learning towards mastery, and the last that will be discussed here in detail, comes from the brothers Stuart and Hubert Dreyfus. They have developed a five-stage model of skill acquisition, especially applicable to vocational trades, which can be helpful for both student and teacher in their understanding of the mastery process of learning (Hiim and Hippe 2001). The five stages progress from novice – intermediate – competent – proficient – expert. Each level describes the practitioner having the following traits: 1) the 'novice' is newly introduced to a new skill and adheres to rules and plans in a strict fashion. There will also be little developed ability towards discretionary judgment. 2) The intermediate or advanced beginner begins to observe diverse aspects of meaning and develops a more versatile relationship to several contexts belonging to the same activity. Each of these contexts has equal importance. 3) The competent practitioner has a greater wealth of experience, is beginning to be able to sort and choose which skill needs be used in each situation, can participate in planning and has a more developed sense of action – consequence. Setting up work routines and gathering information are indicative of this level. 4) The 'proficient' worker or student has achieved holistic understanding and adaptability towards a greater diversity of situations. They are more capable of evaluating events happening around them, but may still depend upon maxims in their decision-making processes. 5) At the fifth level the individual has reached a level of expert. Here the practitioner has adequate experience to make decisions independent of rules and guidelines set by others. There is often a high level of tacit knowledge, meaning that they know what to do without necessarily having the ability to express their actions verbally. Experts would, to a large degree, find themselves at the right-hand scale of Krogh's model of learning taxonomy (figure 2.5.1). Intuition and creativity play strong roles in the expert's decision-making process (Ibid. pp. 55-62).

These competency levels can be helpful to the teacher in establishing assessment criteria according to curriculum goals, or for an apprentice mentor in evaluating the progress of his or her trainee. For the trainee or student it would be helpful in their own self-evaluation to have insight into these stages. The skills checklist that I have distributed to students at SJH (see appendix 5) is an attempt to encourage them to review a list of potential tasks with subsequent skills and then evaluate their own related progress. This checklist is also possible for the student's teacher or for the apprentice's mentor, to use as an evaluation tool together with the



student or apprentice in review of his or her progression. The checklists are described in more detail in section 4.5 below.

As mentioned at the beginning of this chapter, there are a magnitude of theories and volumes of scholarly work from which to draw insight into this work of *“being and becoming a genuine teacher”* (Hugo 2012 p. 1). I have presented views into a number of theoreticians that have been inspiring and relevant to my thesis question. Theories are only theories until one puts them to test and judge their applicability in one’s own practice. In the section below are presented the research strategies and methods I will use to gather empirical evidence in order to test the theories and confirm, repudiate or create a basis for their evaluation.

# Strategy and methods

## 3 Research Strategy

In beginning this master study one of the first questions posed was: What is it you are burning to learn? This led to the first research question and evolution onward to the one for this thesis. As mentioned earlier the transformation process has involved making many adjustments in attempts to find the essential “what, how and why” relevant to my own work. Action research is the basic research strategy behind the framework of this study; case study has been an important learning and research tool through which I have gathered experience in testing theories and concepts (Eilertsen 2013). Methods used to gather data have been questionnaires, competency mapping (appendix 5), interviews and conversations, participatory observation, audio and visual recordings including photography, journals for myself and my students, and literature. Below is an attempt to describe this aspect of the work.

Østergaard (2010 p. 2-3) gives concrete and helpful advice about research design and process. A prerequisite he emphasizes is the importance in choosing a subject of genuine interest and meaning for the researcher involved. Secondly is the importance of developing solid knowledge base about the subject and about earlier research in that particular field. A third recommendation is to make sure that the research question addresses a need in society. Regarding the questions I have been working with I feel these guidelines are present. The trick for me has been to find the essentials, or the scarlet thread, from which to formulate my question. In this process a colleague suggested reading David Silverman’s book *Doing Qualitative Research* (2005).

Silverman informs about three personality types and temperaments that categorize novice researchers: the “simplistic inductivist”, the “kitchen sink researcher”, and the “grand theorist” (ibid. p.91-92). The simplistic inductivist expects the research question to ‘appear’ underway, provided one works within the research field; the ‘kitchen sink’ researcher takes on far too many interesting issues that it becomes an overwhelming and unrealistic task to come into depth in any of them; the ‘grand theorist’ digs themselves down in theories and literature and struggles to get out of the head and into the concrete phenomenon in question. In essence Silverman is advising to be aware of the risk of one-sidedness: identify a question, limit the field and go into depth, and have a balance between practical and theoretical exposure; the work need be feasible as well as theoretically and empirically grounded.

In the course of the past year and a half all of Silverman’s descriptions and some pitfalls have been experienced. In autumn 2013 the inductivist nature took hold due to an undefined research question. While visiting the USA in October I had three interviews with potentially key people, but the research question had not yet been clearly defined. The interviews suffered from this lack of direction and led more in the direction of unstructured conversation than focused

interview. At SJH many different approaches towards working with the students were experimented with, hoping for the right question to appear. During summer 2013, and even as late as January 2014, the 'kitchen sink' overflowed with many interests pulling in different directions. There were so many relevant experiences I felt could illustrate my quest. The grand theorist approach took hold on a couple of occasions, but I realized at a certain point this winter that I had to get on with things and accept that there can be something left to read after writing the thesis. At the last consulting meeting with our study advisors at NMBU we agreed that a particular case study that I had led in 2012-2013 would be appropriate and that other experiences could be supplementary. In January 2014 a final decision was made. Since then focus and motivation have been in place. This brings me to a description of the strategies and methods used for the empirical work.

### 3.1 Action Research

Post World War II, social psychologist, Kurt Lewin, considered the founder of action research, was concerned with finding new methods of solving social conflicts. He challenged existing research strategies at the time for having a highly academic, authoritarian, and distant relationship towards research subjects, for example interracial strife in local communities in the USA. The conflicts at street-level could doubtfully be settled or even understood from an office chair removed from the realities on the street. Lewin developed an action strategy of going into communities and engaging in direct and democratic contact with the research subjects. His premise was to build upon first-hand experience and find solutions in cooperation with those concerned. Through repeated experiments, projects and action, in which the researcher directly partook in community with the subjects, he found that one could gain important insight towards developing sustainable principles for improvements in social life (Brinkmann and Tanggaard 2012 p.101-102). Democratic participation between the researcher and the subjects was a central principle. In this way one can say that the research was done in cooperation 'with' and not 'on' the subject group, and that resolves developed collectively gave the participants a feeling of ownership to solving their own challenges.

*"Action research is a form of enquiry that enables practitioners in every job and walk of life to investigate and evaluate their work"* (McNiff and Whitehead 2012 p. 7). Those having focus on development of social areas within education, community and organizational development can find action research useful (Brinkmann and Tanggaard 2012 p. 102). Educators who wish to systematically explore and develop their own practice commonly use this research strategy. It can be practiced at first, second and third person levels. This was described concisely above in section 2.3.1., and again here. According to Reason and Bradbury, *"First-person research is the kind of research that enables the researcher to foster an inquiring approach to his or her own life, to act out of choice and with awareness, and to assess effects in the outside world while acting. ..."* *"Second-person research is when the practitioner can 'inquire face-to-face with others into issues of mutual concern...'* *Third-person research looks at influencing wider social systems... a wider*

*community of inquiry involving persons who, because they cannot be known to each other... have an impersonal quality*" (ibid p. 12). Nielsen and Nielsen (2012) also speak of these different levels. In my situation, first-person research is working on developing my own teaching methods and reflecting on what I have experienced and learned in due course. Second-person focus is on how the research group of students, teacher collegium at SJH, and individual hosts on apprentice farms can utilize the results of the transformation process that they as a group have experienced. At third-person level it would be the individual school, agriculture education in general and the colloquium of apprentice farms that may gain from research results.

Based on this background information, action research implies that the researcher is engaged *with* both the research subjects and the questions of research. This is a qualitative research strategy focusing on 'why' and 'how'. It strives towards giving the researcher the possibility to explore, reflect upon and develop his or her practice (McNiff 2002 p. 5). The researcher themselves has responsibility to lead, initiate, coordinate and report on the research process and results. The subject group is integrated in the research process and contributes underway with input through dialog and other forms of exchange with the researcher. The goal of the research is to work towards an improvement of praxis and this happens via interaction. This is especially useful when the researcher is familiar with both the subjects and the work environment in question.

In her doctorate thesis Sigrid Gjøtterud (2011 p. 51) refers to McNiff and Whitehead's assertion (my translation): "*when we understand our self as involved in other peoples lives, and them in ours, it is natural to choose a research approach in which the researcher has an inside perspective and is participating. Action research involves an approach in which the researcher attempts to account for and explain how he or she influences or is influenced in mutual relationships.*" In my teaching situation, and from my ontological standpoint in relation to what I wish to develop, this description is fitting. I have close contact to my students, both in the classroom and in field-practice on the school farm. I also have ample opportunity to meet the students individually in a variety of scenarios in which we can influence each other. I have also had active contact over many years with farmers and gardeners who have had apprentices who either come to attend SJH or have been students here and had practice or become hired hands at their farm after their education. At this point in my career, a good number of my earlier students now manage their own operations and are even practice hosts for current students.

The opportunity of experiencing the class as a unit and the students individually has made it possible to test out a need expressed by Donald Schön in his book *The Reflective Practitioner: How Professionals Think in Action* (2011). He presents a need for a balancing of the relationship between the 'professional' (theoretician) and the 'client' (practitioner) and basically recommends that they approach one another with respect and reflect upon each another's valuable experiences with intention to establish a close relation and team in which they can

learn from each other. These ideas are contiguous with action research principles of researching 'with' as opposed to 'on' the subject group. One can also triangulate on the suggestions from Saugstad, Kvale and Nielsen in which they recommend Aristotelian idea of allying the strengths of both theoretical schooling and practical schooling in the 'complete' education. The main message Schön points out here is that 'experts' step down from the pedestal of expertise and sovereignty in their profession and develop an alliance with their client in respect and reverence towards the person that they are. As an exercise, Schön mentions that the 'expert' should cultivate three helpful attitudes. First is to take a reflective and humble role in accepting the responsibility of having professional expertise, but realize that I am not the only one who 'knows his subject'. Second is to build a relationship to the students' thoughts and feelings and help the student 'discover' for themselves the subjects in question. The third point is to establish a free and real relationship to the student in a way that the role as educator is not to be hidden behind a professional façade (ibid p. 290-300).

### **3.2 How to use Action Research in my praxis?**

Jean McNiff's work (2002) has been especially helpful in guiding how to practice action research. By first reflecting on one's own praxis one can identify something that one will explore and develop. The second step is to think through a path forward and what one can do to test out a hypothesis or question and document underway what is experienced. Action learning builds upon repeated learning and reflective cycles; action research, though similar in its movement to action learning, poses a demand on documentation, analysis and reporting. One is not finished with the first round of trials before completing an analysis and reflection, and, based on previous results, making a new standpoint and modifying the next step forward. This process continues through several rounds, as many as necessary until enough data is gathered to enable a final analysis or resolution.

McNiff mentions that the action researcher primarily should have focus on his or her own values and intentions that are important to develop. This is an existential question requiring an introspective look at why we have chosen to do what we are doing with our life. If we identify something we wish to change then we have a question that can be appropriate for action research. A typical task can, as mentioned earlier, have impact at first-, second-, and/or third person levels. My impression is that the starting point be at the first-person level... that there is an inner need for change that motivates. Out from this one would have a strong foundation for and enthusiastic approach to the research topic. From there one can build the research through activity, accumulating empirical and theoretic knowledge.

Though written in relationship to the art and act of teaching I feel that the following discussion can also relate to an approach towards action research. In my own translation, I would like to cite Krogh and Jolly (2013) from a discussion they present about the sequential taxonomy of learning relationships between that which engages the student's inner nature of feeling or

personal bonding, that which stimulates to activity of the will, and that which stimulates cognitive activity of the mind.

*“Relationship-based experiential learning begins with learners connecting themselves to that which is to be learned. The next step is carrying out related tasks with development of skills and exercising qualities of the will. This results in creating a foundation and sounding board for development of knowledge and comprehension. Beginning a learning task by focusing on competency criteria involves directing one’s focus on the end result of the learning process without first forming a foundation from which desire for learning is based... ”* (Ibid p. 41-42). The taxonomy of this sequence appears like this (same table as used on page 30):

| <b>Qualities</b>                          | <b>Original condition</b> | <b>Developed quality</b>         | <b>Formative possibilities</b>    |
|---|---------------------------|----------------------------------|-----------------------------------|
| Associate, bond, connect                  | Feeling                   | Compassion                       | Empathy/identify with others      |
| Directing the will towards concrete goals | Willing                   | Determination, motivation        | Personality, integrity, fortitude |
| Exceed, go beyond, initiate anew          | Thinking                  | Reason, sensibility, responsible | Intuitive recognition             |

**Figure 3.1: Sequential taxonomy of learning relationships based on human characteristics and learning development (Krogh and Jolly 2013 p. 42)**

Krogh and Jolly describe that the movement through a learning process begins at the upper left and moves gradually to the right and downward through the table. The degree of levels achieved would be dependent on the student’s starting point and capabilities (ibid p. 42). Movement for me through the research process has been quite similar.

Gjøtterud (2011 p. 70) refers to Heron and Reason (2001) and Heron and Reason (2008) and mentions five skills for action researchers doing inquiry research. These skills, if utilized and developed will help the learner and researcher move deeper into the sequential taxonomy mentioned above:

The first is the ability to live into the other person’s situation, of being “present and open” and of having empathy. One needs develop the ability to see one’s place in the entire situation and not just see that that concerns oneself.

A second skill is to be able to “see a context from several angles”. Cooperation is a necessity if one is to progress as a team. Being locked into one’s own preconceptions and work-patterns can be an obstacle for development, while opening up to new viewpoints and other ideas can create expanded possibilities. Critical friends can be helpful in this regard as a sounding board, and give important feedback that can help one “reframe” one’s approach to the task.

A third skill is called “radical practice and congruence”. This means the ability to analyze an activity or practice and identify different components of significance both alone for themselves and in relationship to each other. For example, in a group activity, how do the different

individuals function in practical skills, in their ability to communicate as a group, context of activity in the surroundings, climatic conditions, etc.? Being able to see all of the different aspects as congruent, or in relationship, to each other, is an important skill for a teacher, leader, or group of individuals to develop.

The fourth skill mentioned is the ability to be present in the activity, and at the same time be able to “lift one’s attention” above the level of total immersion in order to evaluate alternative solutions to the task. This is referred to as being able to take a “metaperspective” viewpoint by observing the situation from the periphery, or even from outside of the periphery, as opposed to from the center. Scharmer (2007 p. 147) refers to this by saying, *“the boundary between the observer and the observed collapses and the observer begins to see the system from a profoundly different view: a view that includes himself as part of the system that is being observed...”*

The fifth skill is that of having “emotional competency”. This is particularly in reference to being able to understand one’s own feelings and responses to a situation, and that the response is appropriate for the context.

How can this be applied in my research situation, or in working directly with students, finding out where they are at in their development and helping them further? The advice might sound as follows: Strive to be 1) present and open in relationship to the students; 2) see the research context ‘from several angles’, not only from my own. Involve several individuals and listen to their opinions; 3) be aware of the different components that have influence on the result, for example the individuals alone, how they influence each other and how the learning arena influences the learning; 4) being both present in the research activity, for example as participating observer, and at the same time have a peripheral view of what is happening; and 5) to have a metacognitive awareness of my own subjective involvement in the research.

### **3.3 My action plan in detail**

Below are points that McNiff (2002) suggests helpful for making a detailed plan. To these I will describe what I feel will be appropriate tasks for my own research under each point.

*What am I interested in exploring?*

I want to have focus on how, in cooperation with a student or apprentice, the teacher or mentor can guide and assist the learning process. What kind of relationship and process is useful in order for the student/teacher relationship to keep the learning process both motivating and fruitful for the student training towards his or her chosen profession?

*Why do I want to do this research?*

After many years experience as educator I see more clearly that it is the student’s motivation that is the foundation for learning, rather than learning being a result of “knowledge” being disseminated by the teacher attempting to fulfill competency goals and formulations from a

curriculum. The curriculum is important as a guideline, but it needs to be put into contexts that are relevant and meaningful for the student.

*What type of evidence can I gather to show why I am interested in this subject?*

Major criteria for evidence are students that lose their motivation because of being overloaded with, for them, irrelevant lecturing and theory before they are prepared to receive it. I can interview students, teachers and practitioners with experience with apprentices to get their opinions.

*What am I able to do? What will I do?*

I am able to work together with students and teachers at SJH. I also have a network of contacts that are farmers, gardeners and/or educators with experience with apprentices. I will work primarily with my own students and bring in the element of on-farm training by guiding and following up SJH students having practice sessions both at the school and on farms. I can be a participating observer in practice sessions for some of our students on a farm (see case study below). I can interview students. I can give them and farmers offering apprenticeships the checklists (appendix 5) that help them identify the skills they have, they can offer, and that they want to develop, and then I can go through these lists together with them to help identify important issues. I can read literature about didactics, personal development, apprenticeship training, and I can travel and attend relevant seminars and meetings. Examples of this are meetings with farm educators at the Pfeiffer Center and at Hawthorne Valley Farm and Training Center, both in New York, USA; attending farm-based education seminars both at Nordgard Aukrust in Lom, Norway, the Nordic Forum Meeting in Järna, Sweden in November, 2013 and the Leonardo da Vinci Mobility meeting in December 2013 in Portugal together with representatives from NMBU, Warmonderhof, and agriculture universities from Switzerland, Austria and Portugal.

*What kind of evidence can I gather to show that I have an influence?*

I will keep a journal of my own reflections, experiences, relevant conversations and dialogs, and students can write journals and reports reflecting on and answering specific questions about experiences from practice periods. Interviews with students, teachers and apprentice hosts can bring awareness of the effects of this type of approach to guiding the student. Photography and audio-visual recording will be useful tools for documenting.

*How can I explain that influence?*

The influence can be explained by comparison to teaching situations in which the teacher trials an opposite approach, e.g. lecturing first, without making an effort to stimulate a bond between the student and the subject matter.

*How can I ensure that my decisions are fair and correct?*



It can be good insurance to have a group of individuals that I can speak with about my findings and about what I wish to accomplish. McNiff refers to two types of groups; one being 'critical friends' and the other a validation group (McNiff and Whitehead 2012 p.164-166). These groups can function as sounding boards and give important feedback as to findings and further directions. Critical friends have a less formal role than a validation group. The critical friends are people one often knows well enough that they feel able to give serious feedback about the work and questions the researcher may have. A validation group meets less often and is often put together of people with a more professional relationship to the subject matter of the research, and are willing and able to give advice that is of value to the appropriateness, professionalism and validity of the work (ibid.). The meetings we have had at NMBU with advisors and master students have functioned as a form of validation group. I have had a helpful group of critical friends connected more directly to my work at SJH.

*How can I change my practice in light of my findings?*

Change in practice will come through analyzing results and implementing them into my practice of planning and guiding students through the programs and subjects that involve our interrelationship. The process will be cyclical in that after each trial of a new plan a reflection and evaluation process will lead to new adjustments and new attempts to work on the teaching relationships.

### **3.4 Case Study as a learning and research tool**

During a meeting with advisors at NMBU in February, 2013 it was made clear that 'case study' would be useful for gathering empirical evidence and testing of theories and ideas relevant to the research question. Having already completed an interesting and relevant field study as PPU-student in November 2012 and January 2013 they recommended using this as a research basis for my masters thesis. Reasons for this were that many of the elements of my research question lay embedded in the project. This suggestion led further to literature search and study towards a deeper understanding of this strategy. The previous project had given a solid foundation through practical experience on which to build the epistemological knowledge of case study technique.

#### **3.4.1 What are case studies?**

Robert Yin (2009 p. 8) classifies approaches for gathering evidence in scientific research into five major methods: experiment, surveys, archival analysis, historical analysis and case study. To each of these methods he describes three categories of relevant situations that are used for these methods: 1) the type of questions posed (how, why, what, where, and how much or how many); 2) whether or not the researcher has control on behavioral events; and 3) whether or not the research focuses on contemporary events. Case study's character, similar to action research, is a strategy directing itself toward 'how' and 'why' questions about contemporary events and of which the researcher has little control of the subjects' behavior. Tor Vidar Eilertsen (Brekke and

Tiller 2013 p.185) goes further in describing case studies as not a research method but a strategy that can utilize a variety of research methods, including surveys for gathering quantitative data. A case study is generally considered a form of qualitative research when it focuses in on activities and projects under development. Action research would be the predominate strategy, and case study would be subordinate if it was used in a project being guided by action research principles.

Yin warns the researcher using case study that the form demands disciplined steering and control and that it can demand large input of both time and resources. There are also few controls regarding the preliminary screening of the given researcher's skills and abilities to perform the work successfully. Another characteristic of case study is that it produces results having less of a basis for scientific generalization than studies based on quantitative research. The point Yin is trying to convey here is that the researcher is informed from the beginning of both strengths and shortcomings of this technique. Being well informed and prepared is necessary before getting started.

Case study research has a twofold nature and is "*an all-encompassing method – covering the logic of design, data collection techniques, and specific approaches to data analysis*" (Yin 2009 p.18). The twofold nature has following characteristics:

Part one: "*A case study is an empirical inquiry that*

- *Investigates a contemporary phenomenon in depth and within its real-life context, especially when*
- *The boundaries between phenomenon and context are not clearly evident.*

Part two: "*The case study inquiry*

- *Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result*
- *Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result*
- *Benefits from the prior development of theoretical propositions to guide data collection and analysis*" (ibid).

To make this more specific to my own situation, through cooperation with students by first learning to know their interest areas and abilities, I could help them find meaningful learning situations through which to progress towards mastering skills. Then, by designing a case study encompassing a chosen learning situation in cooperation with the student, I could participate, observe, collect data and find appropriate approaches for data analysis. Out of this scenario generalizations could be made towards further study or application in new teaching situations. In the preparatory phase of the case study it would be important to have guiding theories that could focus in on gathering particular types of data and analysis (Silverman 2005), but in the

spirit of action research it would be important with flexibility and an openness to change course if evidence made clear a need for new parameters (McNiff 2002).

## **4 Methods supporting chosen strategies**

The research strategies described in the preceding section pose questions about 'why and how' to improve one's practice. This type of research involves direct contact between researcher and subject and thereby three classic methods (Brekke and Tiller 2013) of gathering data which afterward will be analyzed and used to confirm, invalidate or form a basis for adapting the theories or research questions that one begins with at the start. These methods include: 1) observation and/or participatory observation, 2) interview and 3) a quantitative method of using statistics and questionnaires. Questionnaires can also be used qualitatively if the information one wishes to gather is of a subjective nature. A fourth method, relatively new in qualitative research, *World Café* or *Learning Café* (Thunberg 2013), is used as a method to engage many individuals in a systematic discussion to bring forth opinions about clearly defined questions. Below I will describe the methods that are used in my research work. The fifth and final method used to gather information in this study is a subjective survey.

### **4.1 Observation as research method**

For a researcher to gather first-hand experience of how different teaching situations function best it is appropriate for them to put themselves into a role as observer (Brinkmann and Tanggaard 2012). This will provide empirical evidence, which can be condensed into narrative, analyzed and then be placed into a relationship in connection to the research problem in question. This information, in combination with interview will give good possibilities for a broader and deeper understanding of research results (Brekke and Tiller 2013 p. 117).

There are different roles a researcher can place himself or herself as observer. These depend on how near or distant the researcher is in relationship to the participants in the subject group. The two primary roles are either as a full participant in and with the subject group, this is common in action research, or as pure observer where the researcher is hidden or removed from the subjects in order to avoid influence. A fully participating researcher will naturally have a close relationship to the participants and will easily develop social bonds to those being observed. Observation from a distance, either by using video recordings or text written by others that have been participants, allows for a more objective interpretation and can offer value in the form of triangulation because of the possibility to 'see' conditions that may be blind spots for the participating and more subjective observer (ibid p.114).

Brinkmann and Tanggaard (2012) as well as Brekke and Tiller (2013) recommend use of video and/or audio recordings coupled with field notes as important resources in observation analysis. Both give the possibility to return to a situation and can be used as analysis material for more than one researcher. This will also contribute to the validity and reliability of

understanding and will simplify documentation of the research work. Photography can register and show relationships a subject has to particular phenomenon.

How I have intended to use observation for gathering data is mostly through participation in activities together with students that I have under my instruction. The volume of participatory data I have goes beyond the scope of this research, but I include some of the relevant situations that have occurred from September 2012 and through the duration of this study; particularly the case study described below and to a lesser practice sessions and placements that the students have encountered with me as supervisor.

#### **4.2 Interview as research method**

Common in qualitative research is the use of interview as method to gather information about a subject's vantage point and experiences of their surroundings (Brinkmann and Tanggaard 2012). Similar to conversation, a research interview is a dialog between two to several persons, but the interview is more a structured conversation being steered by the researcher and having focus on specific questions (ibid.). Brekke and Tiller (2013) add that the method demands careful preparation and leadership in order to stay on track, but simultaneously gives the researcher the possibility to come in close contact with the interviewees. They suggest seven phases to consider in preparation of the interview: *"identifying a theme, planning for the interview, executing the interview, transcribing, analyzing, verifying and divulging"* (ibid. p 124 – 125).

Once a theme is identified there are two types of questions that relate to the research question in mind: research questions and interview questions. Research questions are based on finding theoretical explanations; interview questions seek descriptions from the research subject's relationship to phenomenon or contexts that embrace the theories that the researcher wishes to confirm or invalidate (Brinkmann and Tanggaard 2012 p. 28). An example of this in my case: Research question to SJH: Pedagogical foundation and attitudes that are important for a farmer to have in order to be selected as a practice host. Interview question: Which farmers do you know of that have these qualities? Research question to a farm host: Relation-building with apprentices or students-in-practice. Interview question to farm host: What is important for you to establish in the relationship with your apprentices on their first day of practice?

It is suggested to carry out few, rather than many, interviews and analyze in depth. Enough interviews should be conducted in order to reach a saturation point of information relevant to the particular issues. In the planning phase, besides having appropriate questions one should plan on how many, when and where the interviews will be run. A quality interview is well prepared for and demands previous knowledge of the subject matter; it can also be wise to have or develop skills in conversation technique. As an aid one can make an interview guide with both research questions and interview questions (ibid.). Brekke and Tiller (2013) give detailed information on stereotypes of questions that can be useful; details would be decided out from

the specific nature of research. It is also mentioned that silence can be of value in an interview in order to give time to think or remember back to particular episodes that can provide relevant input. By recording and transcribing shortly after the interview the researcher will remember contexts that otherwise are easily forgotten. In the presentation report it is important that the reader *“senses continuity between the questions asked and answers given”* (Brinkmann and Tanggaard 2012 p.33).

#### **4.3 Questionnaire integrated with interview as research method**

Due to having a very close relationship to my research subjects, primarily my own students, colleagues and network of practitioners, I was interested in gathering subjective feedback regarding my thesis question. I chose to not doing a quantitative survey in fear of spreading myself too thin and increasing my already stretched workload. At the beginning of the project in October 2012 I produced a set of questions for each of three groups: SJH administration, SJH students and farm hosts who have experience with apprentices and SJH student placements-in-practice (appendix 3). This set of questions was designed to give qualitative feedback about the subjects’ opinions regarding school-based and farm-based training in agriculture. The questionnaire was sent out to four farms and in two of the cases was used as interview guide when I visited the farms afterwards. More of this in the empiric chapter.

#### **4.4 World Café or Learning Café as research method**

A relatively new, highly democratic method and well suited to action research has since the millennium-shift been used to encourage dialog and participation in matters that concern interest groups of individuals. Juanita Brown and David Isaacs initiated the method, called The World Café, in 1995 in California and its use has grown to international proportions (<http://www.theworldcafe.com/history.html>). The method has similarities to the cycles of relations-based experiential learning and action learning and is particularly useful in the beginning of a research endeavor because it helps create a clear image of what participants in a project have for opinions. It also helps the researcher focus in on the essence of what concerns the participants regarding the research question. Odd Arne Thunberg (2013) recommends this method as a supplement to interview for gathering more detailed information and to provide depth and cross-references (method triangulating).

World Café comprises several steps. The initiator gathers all of those involved and gives a short presentation of the concerning issue. Beforehand there are either several key research questions that the leader has thought through, or there can be a round with dialog to bring forth research questions that the group finds most relevant to the issue. The meeting room is arranged with several tables with room for 5 – 6 participants per table. Each table has one person stationed as secretary and one of the chosen questions to be discussed. The participants are divided into groups of 4 -5 individuals that wander from table to table, discussing at length enough for each

individual to express their viewpoints of that particular question. The secretary takes notes and remains to receive and record the next group's viewpoints and so on until all groups have visited each table. The next step is for the secretaries to edit, condense and categorize all major and minor points, which are then be presented in plenum. This analysis of the discussions will then crystalize the central points at issue and become the empirical result upon which one can further build the research case (Thunberg 2013 p 230). As in the experiential learning circle, depending on the result the researcher can decide whether or not to continue on further rounds of dialog until enough data is gathered to satisfy their needs.

#### 4.5 Subjective survey as research method

On several occasions has been mentioned a survey scheme (appendix 5) that I have adapted from the North American Bio-dynamic Apprenticeship Program (NABDAP). The survey is in actuality a set of checklists for farming and gardening skills that can be used by anyone in the process of training towards mastering the different aspects of the profession. The set of checklists (Gardner and Gardner 2003) have been used for a number of years in the USA. I became familiar with them simultaneously with the latest reform for education, "*Kunnskapsløftet*", in the Norwegian school system. One of the results of this reform, described in more detail in section 2.3.3 about "*Learning requirements*", is that each subject has a written competency plan and set of evaluation criteria that is quite voluminous.

My experience with these plans has been varied. In preparation the school year and in evaluating the progress and capabilities of the students, they are helpful. The students, however, receive a plan for each of the six - seven subjects they take, depending on which level they study. This comprises approximately 40 - 50 pages of competency and evaluation criteria for them to familiarize! There is not a survey of how many students become familiar with the plans, but in informal conversation with students it appears that, except for students most eager, the plans lie untouched until exams. Central to the research question is getting to know the students' abilities and interests towards mastering this profession. The plans could be used as interview guide or survey, if they were less cumbersome. What to do?

When I first came across the NABDAP skills checklists were useful in preparing my own teaching plans. They gave a thorough overview of skills required for most of what a practitioner might encounter in ecological/biodynamic farming and gardening. In addition it was refreshing and reassuring to compare earlier experiences with curriculum content to the content that had been established for a similar education outside of Norway. Appealing were the minimal descriptions of evaluation criteria, with the idea that this would occur in two stages or levels: 1) as self-assessment, and 2) in dialog talks between the learner and his or her mentor, preferably in that order. For apprentices, there would be meetings underway and again upon completion in which levels of attained competence and future plans or needs would be discussed.

| 1. Plant Cultivation & Management        |                            |            |       |             |                     |                         |                       |                         |        |
|--|----------------------------|------------|-------|-------------|---------------------|-------------------------|-----------------------|-------------------------|--------|
| Type of Crop:                            | Green-house Crops          | Vegetables | Herbs | Grain Crops | Silage or Hay Crops | Bushes, Berries, Hedges | Fruit or Nut Orchards | Timber, Firewood or Sap | Other: |
| <b>REQUIRED SKILLS</b>                   |                            |            |       |             |                     |                         |                       |                         |        |
| making compost                           |                            |            |       |             |                     |                         |                       |                         |        |
| making special soil mixes                |                            |            |       |             |                     |                         |                       |                         |        |
| preparing topsoil/primary tillage        |                            |            |       |             |                     |                         |                       |                         |        |
| preparing seedbed/secondary tillage      |                            |            |       |             |                     |                         |                       |                         |        |
| cover cropping/green manuring            |                            |            |       |             |                     |                         |                       |                         |        |
| calculating spacing/quantities           |                            |            |       |             |                     |                         |                       |                         |        |
| direct seeding/transplanting             |                            |            |       |             |                     |                         |                       |                         |        |
| propagating/grafting                     |                            |            |       | NA          | NA                  |                         |                       |                         |        |
| weeding/pruning                          |                            |            |       |             |                     |                         |                       |                         |        |
| judging water needs/watering             |                            |            |       |             |                     |                         |                       |                         |        |
| shading/freeze protection                |                            |            |       |             |                     |                         |                       |                         |        |
| identifying weeds/diseases/pests         |                            |            |       |             |                     |                         |                       |                         |        |
| judging readiness for harvest            |                            |            |       |             |                     |                         |                       |                         |        |
| harvesting/mowing/felling/tapping        |                            |            |       |             |                     |                         |                       |                         |        |
| post-harvest handling/hygiene            |                            |            |       |             |                     |                         |                       |                         |        |
| record keeping                           |                            |            |       |             |                     |                         |                       |                         |        |
| soil testing/determining fertility needs |                            |            |       |             |                     |                         |                       |                         |        |
| subsoiling                               |                            |            |       |             |                     |                         |                       |                         |        |
| supplemental fertilizing                 |                            |            |       |             |                     |                         |                       |                         |        |
| pollinating                              |                            |            |       |             |                     |                         |                       |                         |        |
| seed saving/cleaning                     |                            |            |       |             |                     |                         |                       |                         |        |
| designing cropping sequences             |                            |            |       |             |                     |                         |                       |                         |        |
| selecting mixes/companion plants         |                            |            |       |             |                     |                         |                       |                         |        |
| controlling weeds/diseases/pests         |                            |            |       |             |                     |                         |                       |                         |        |
| other:                                   |                            |            |       |             |                     |                         |                       |                         |        |
| Name of Mentor:                          | _____                      |            |       |             |                     |                         |                       |                         |        |
| Name of Farm:                            | _____                      |            |       |             |                     |                         |                       |                         |        |
| Name of Apprentice:                      | _____                      |            |       |             |                     |                         |                       |                         |        |
| Dates of Apprenticeship:                 | ___/___/___ to ___/___/___ |            |       |             |                     |                         |                       |                         |        |
| Mentor's Signature:                      | _____                      |            |       |             |                     |                         |                       |                         |        |

North American Biodynamic Apprenticeship Program - Skills Checklists ([www.biodynamics.com/nabdap](http://www.biodynamics.com/nabdap))

Figure 4.1 Example from the set of skills checklists used by NABDAP. Link to the complete lists in English is [here](#).

|       |   |
|-------|---|
| X     | This skill can be learned on this farm                                  |
| ⊗     | This skill will be taught to this apprentice (individualized agreement) |
| ⊗ √   | Apprentice has observed a demonstration of this skill                   |
| ⊗ √√  | Apprentice has practiced this skill under supervision                   |
| ⊗ √√√ | Apprentice can perform this skill independently                         |

Figure 4.2 Summary of symbols to be used in filling out checklists.

In farm-based education the lists are meant to follow the apprentice throughout their training, from farm to farm, and can be used both as a reference for their own progression as well as a form of résumé in applying for work on new farms. The lists include: plant cultivation and management, animal husbandry, biodynamic preparations, machine-powered equipment, draft animals, basic business management, basic crafts, basic processing and basic construction. Both the responsible farmer and the apprentice have their own respective set of lists and they fill them out independently. Upon completion of each training period both apprentice and farmer sign each list as a formality.

Since beginning to use these lists there has been an intention to translate and adapt them to conditions in Norway, for three major reasons: 1) in order for the students at SJH to have them as they continue on their way after completing their school training, 2) to simplify the competency and evaluation criteria without jeopardizing the content of study, and 3) to provide a tool for the teacher and student to work together in facilitating meaningful learning situations

for each student. This third point became a particular interest, and was a major incentive in the development of the research question used in this thesis.

A result of this the translation was made this winter and the lists were distributed out to all students at SJH, three farmers and two teachers. A new list was added at the very end in which the student could prioritize that which was most important for them to now develop. An incentive for this was that they were to have a practice period in mid-April, and this information would be used to help identify which farm could specifically satisfy their priorities. The result and reflection of this are discussed below.



# Empirical evidence and reflective discussion of methods



The learning landscape dominating my daily work is a vocational agriculture boarding school with the school's farm strongly integrated in the educational program. Combined in the training is cooperation with a number of selected farmers, both local and spread throughout the country. The selection criteria for practice farms are based on qualities of the productions on the farms in addition to the farmers' social and professional abilities and their willingness in providing meaningful, profession-related experiences for the students. On the selected farms the SJH students have shorter practice sessions, up to one week per session. Matching the students with appropriate farms is an important process and involves meeting and mapping each student's interests, abilities and expectations to the terms and possibilities each farm can offer.

Helping each student find an appropriate practice farm relates to the thesis question as to how to better work together with the student towards mastering the profession. This section will describe will describe what has been done.

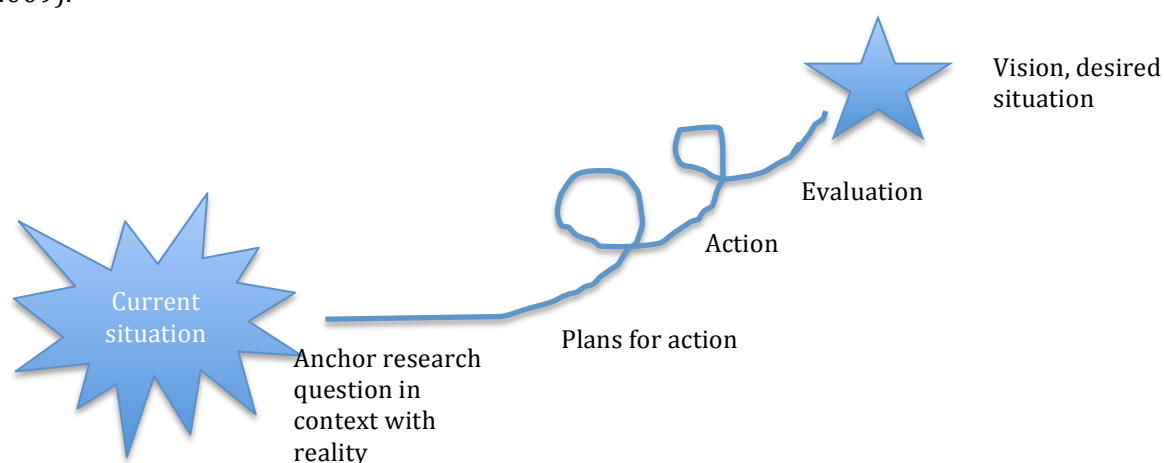
## **5 Case Study at Straumøy**

Simultaneously with the preliminary course in this master's study I worked together with two other PPU students having their practice period at SJH. The project we worked on was to explore ways in which one could couple agriculture school students with a farm and its farmer(s) as pedagogical resources into the curriculum at SJH (appendix 1). One of the PPU students had

parents, both trained teachers and farmers, running a well-established “green care” initiative on their own farm, Straumøy Farm. They provided an educational alternative for children with special needs, and had cooperation with the school systems in several communities. With this as a possible arena, plans were made to decide on a research question and design a prototype to present to the school, class teacher and farmers at Straumøy. After a process of trying to find and formulate the essence of our intentions we settled on the following research question: *How can one establish a learning situation for students of agriculture in cooperation with and practice on a farm built up around a ‘green care’ enterprise?*<sup>11</sup> The vision was to create a prototype project that would incorporate the essential elements of our question and be completed within a feasible time period (Scharmer 2007 p. 417).

### 5.1 Planning phase

In designing and implementing the research project three different didactical models were used to help identify a starting point, a vision and a path to that vision. The model in figure 5.1 helped us organize the project (Strangstadstuen 2005, 2009). The other models used were the ‘experience-based relationship-learning model’ (figure 5.2) of Krogh and Jolly (2013) and the ‘didactical relationship model’ (figure 5.4) for organizing teaching situations (Hiim and Hippe 2009).



**Figure 5.1: Strangstadstuen’s model for organizing a development project (Strangstadstuen 2005, 2009)**

The research question stated above was our *vision*. Our *current situation* was multifaceted. We were developing skills as to how to incorporate a working ‘green care’ farm as learning arena into an existing school curriculum. SJH had in its curriculum an elective course in ‘Green Care Farming’. Our vision implied fusing these two initiatives together at a qualified farm, in this case at Straumøy.

In *anchoring the research question into context* with the school, farm hosts, class teacher and students many pieces needed puzzling together. The school needed to find the time, recognize the meaning for, and have the will to put the project into the schedule. We needed to embed the

<sup>11</sup> For further information about Green Care farming in Norway refer to [Inn på tunet](#) . Website is only available in Norwegian language.

project into competency goals in the curriculum, both in the particular course of study<sup>12</sup> and in the general core curriculum (see footnote 10). We needed to find a qualified site and host with both interest and time to accommodate our project. In addition the class teacher and students needed to be willing to engage themselves in our project. We divided responsibility between us for solving the puzzle and within a week most pieces were anchored in place.

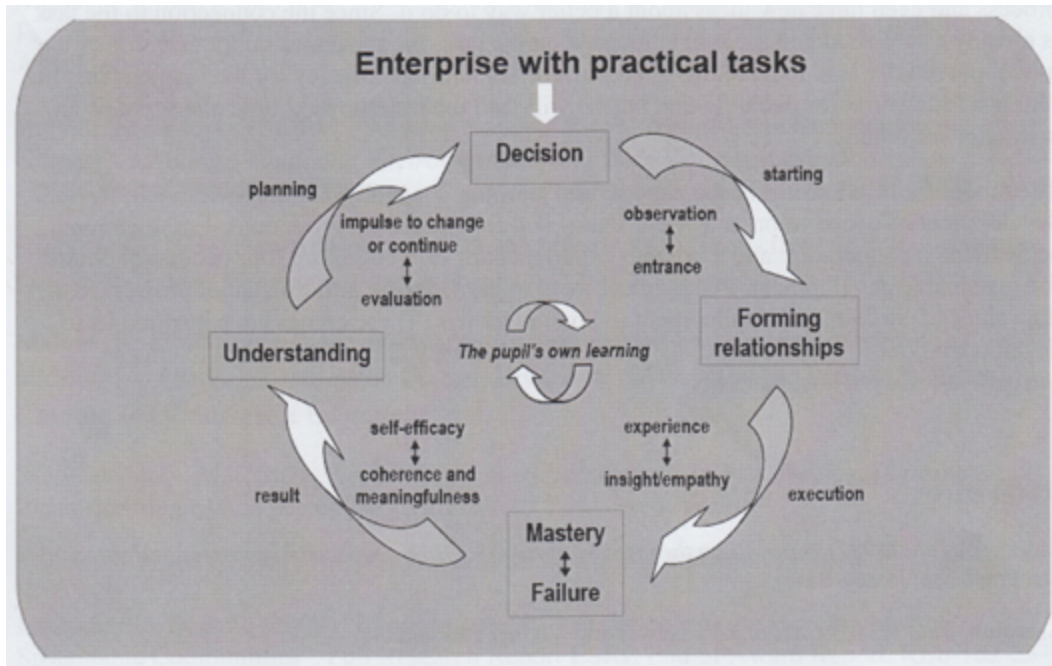


Figure 5.2: Illustration of model for relationship-based experiential learning described by Linda Jolly and Erling Krogh (2012).

In making detailed *plans for action* we wanted to include the students and their teacher. Reasoning for this was to ensure that the students felt a ‘sense of coherence’ with the project, in tune with some of Aaron Antonovsky’s theories on learning (section 2.5.3.1). We used the model of *relationship-based experiential learning* developed by Erling Krogh and Linda Jolly as a reference point for planning (figure 5.2). Details for this model are described in chapter 2.5.3.5 above.

In tune with action research and the above-illustrated cycle, the *action phase* and *plans for action phase* continually alternated. Before introducing the project to the students one cycle was used in the planning stage (a journal describing this process is found in appendix 1). The initial plan was to introduce the students with their teacher present. A focus in the presentation would be to first instill an open and comfortable environment for dialogue. The plan was to have two practice periods at Straumøy Farm, in which the students would plan and lead two rounds of activities for the special-needs children visiting the farm. Reasoning for this was both for us, and them, to be able to plan, enact and evaluate one round and then repeat anew, benefitting from the experiences from the first. A side effect of having two cycles was also that the host farmers,





<sup>12</sup> [Competency plan in farm education for establishing business enterprises](#) (Norwegian text)

Anne and Leif Grutle, would have opportunity, because of the follow-through, to experience a development both in the project and in their interrelationships with the students and teachers.

All would be encouraged to come with questions and feedback, and we would agree to form, and reform the plans as a team. Our role as teachers was to facilitate the process, and to have focus on creating a motivating and meaningful learning environment relevant to, and in tune with, the student’s abilities and goals.

Inspired by Antonovsky’s theory of salutogenesis (Jensen & Johnsen 2005 and p. 34 above) we wanted the students to have a deeper, personal connection to the project, and would engage them in the planning and follow-through process, rather than being dictated by us. If they could see the project as being directly meaningful to their interests and/or needs, and that it was manageable in regards to their existing or realizable skills (see section on zone of proximal development, Vygotsky), then we were confident in a favorable outcome.

In planning stages we worked with each of the three learning processes in figure 5.3. How could we organize the project, and present it, so that they understood the relevance for their own education? What elements could be incorporated to make the project both manageable as well as challenging? How could we find out what was meaningful for each of them and then find elements in the project that could focus in on each of their specific interests?

| <b>Learning processes</b> |  | <b>Experience of connection</b> |
|---------------------------|---|---------------------------------|
| Foreseeability            |  | Understandable                  |
| Balance of challenge      |  | Manageable                      |
| Participation             |  | Meaningful                      |

**Figure 5.3: Antonovsky’s model of relationship between the character of learning processes and learner’s experience of connection to the situation (Jensen & Johnsen 2005 p. 89)**

To help us further in the planning stage we also used a didactical relationship model developed by Hiim and Hippe (2009). The model consists of six points comprising a sequence of interrelated categories: 1) teaching and learning qualifications, 2) learning framework, 3) learning goals, 4) learning content, 5) learning process and 6) assessment (see figure 5.4). By identifying relevant elements in each category the model is helpful set up well-organized teaching. The model was used at three levels: 1) for the teachers organizing a learning situation for the students, 2) for the participating students from SJH to help them organize learning situations for the children at Straumøy Farm, and 3) for the host farmers to understand how we were organizing the practice sessions.

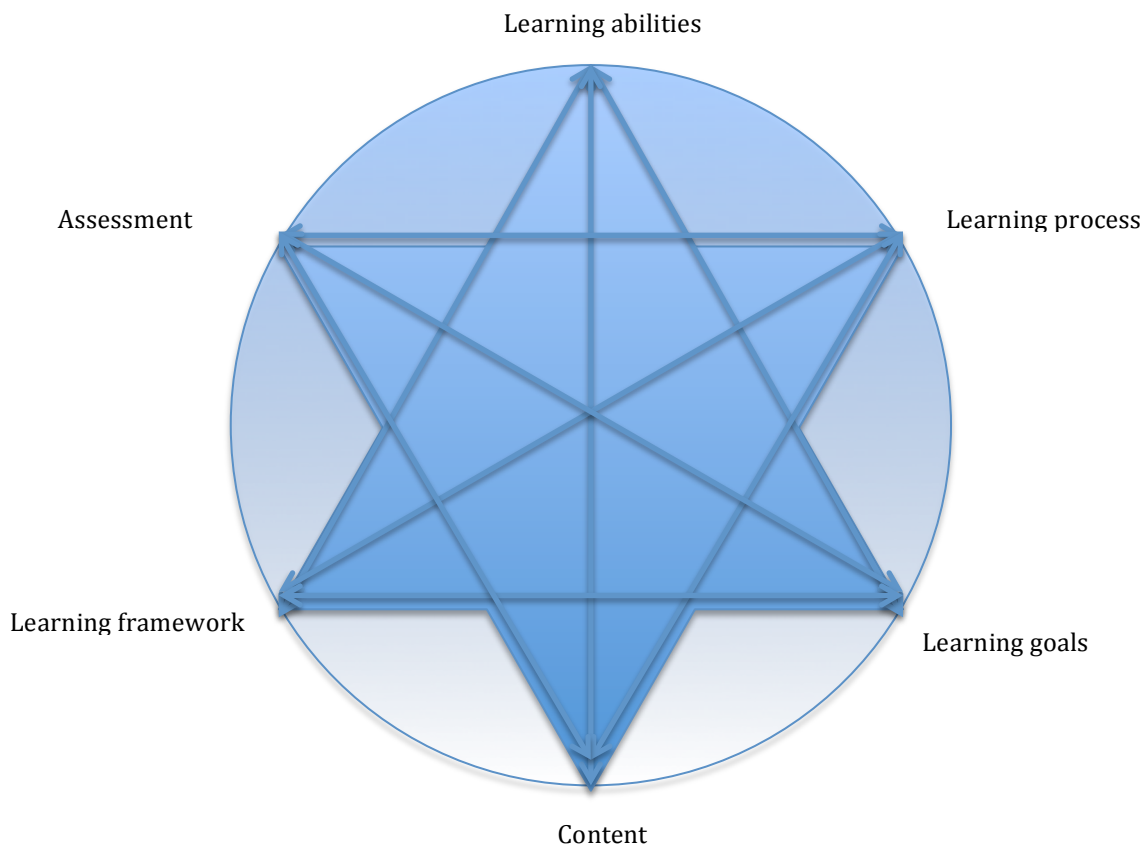


Figure 5.4: Hiim and Hippe's model for didactical relationships (Hiim and Hippe 2012 p. 35)

### 5.1.1 Practical use of Model for Didactical Relationships

#### *Learning abilities*

Regarding learning abilities, the students were motivated and mature, but had limited practical experience. They had freely chosen Green Care Farming as an elective course, and were incorporating this type of activity into their own, individual farm management plans as an extra income-generating activity. The hosts Anne and Leif had many years experience using their skills as teachers and their farm as a framework for on-farm learning for children with special needs. It was relatively new for them to have students as participating observers and organizers. The PPU-students had varying levels of experience with teaching, and with Green Care Farming, and were motivated to learn and gain experience in how to use a real farm as a pedagogical resource for school-based education in agriculture.

#### *Learning framework*

The learning framework consisted of several elements: time frame, logistics, materials, facilities, possible tasks, etc. The time frame regarding scheduling required that both the school and the hosts at Straumøy could coordinate us into an already tightly packed schedule. How many days

at Straumøy would be sufficient time to have a worthy learning experience? Logistics included proper clothing, meal planning, and transport. What materials, if any, should be brought from the school for the projects planned with special needs children? What facilities were at the farm and which tasks were feasible for our students to be involved?

### *Learning goals*

The learning goals could be seen from three different angles: 1) goals of knowledge to be attained, 2) goals of skill levels to be attained, and 3) what level of responsibility, autonomy and attitude is appropriate to develop (Hiim and Hippe 2012 pp. 68-71). From the students' viewpoints, what was most meaningful personally for them to learn? It was planned to learn about this through dialog with the students. The strategy plan in Norway that has developed guidelines and regulations for Green Care Farming (Inn-på-tunet in Norway) could be used as additional literature for the students and us. What was competency criteria required for the course of study (Utdanningsdepartementet 2)? From the farmer's viewpoint, the 'real practitioners', what did they expect or wish to confer to the students for learning goals and exposure? This required dialog with the farmers. From the viewpoint as teachers-in-training a goal was to improve abilities in organizing meaningful learning situations for the students. We were also learning what was involved in being liaisons between the school, class teacher, students and practice farm.

### *Learning process and content*

The learning process could include several different learning theories. From the viewpoint of behavioristic theory of learning, in which action-response aspects are immediate and influence further choice of behavior, an example could be opportunities where interaction and feedback between student and client, the special needs children at Straumøy, would lead to an immediate response and possible change of approach. Another form for learning could also arise through interaction and dialog between those involved. Then, through reflection and internalizing, the student might find motivation, meaning and a feeling of belonging to a group with common interests. These ideas belong to more of a social-cognitive approach and are represented by Vygotsky, Antonovsky, Bruner and Bandura. Lave and Wenger's theory of 'situated learning', or learning in a 'community of practice' are also involved. There would also be a combination of inductive and deductive learning processes; inductive in the sense that the students would be directly involved in practical planning and tasks; deductive in the sense of learning about some theories of planning and enacting learning situations for others (Hiim and Hippe 2012 pp. 91-104).

In order to assure a positive process we wanted to establish a healthy social climate that created open space for the students and others involved to express their thoughts. We had ideas as to content and planned to present this to the students at our first meeting. At the same time we were open to the influence of the students, teacher and hosts as to what we would incorporate. The learning process was planned to include many different aspects of involvement for the

students, teachers and farm hosts: cooperation, discussions before, during and after each meeting, practical preparations for each visit and clearly defined roles of who would have responsibility for what details.

### Assessment

Our plan for assessment was that we would arrange time at the end of each day to write a journal, answering beforehand-designated questions as well as an open post for self-reflection. After journal writing it was planned to meet together with the hosts and take up issues that were of importance for evaluating and using as reflection towards future development of the project (appendix 2). Another form of assessment was an interview on the last day in which we, together with our hosts, could discuss questions that had relevance to my master thesis (appendix 3).

### Summary of planning stage

To summarize, the models of Hiim and Hippe, and Krogh and Jolly, were to be used at three levels; one level for our own planning for initiating the project for the students, the other level was for the SJH students to use the models for planning their own project at Straumøy, in which they were to organize and carry out activities for the children with whom they would work. The third level involved our hosts at Straumøy. By having two practice sessions at the farm we were able repeat the learning cycle twice and thereby experience a progression in development for ourselves as teachers, for the students as practicing learners and for the farmers Anne and Leif as hosts. In that all were going through this together one could say that there was a choreography of parallel and repetitive loops of the Krogh and Jolly's experiential learning cycle.

## 5.2 Introductory session at SJH, November 2012

*"Whenever we want another person to do something, we ought to address him/her and present the need or request in such a way the he or she can receive it, understand it and share response with us, so that the final result would be a joint decision. Then instead of complying with our directive he/she acts in freedom, able then to draw upon the deep store of energy and devotion that lives in his or her soul."* (Sleigh 1998 p. 43)



Figure 5.5: PPU-student Silje introduces experiential learning cycle and didactical relation model to SJH students.

At the first meeting with the students in October 2012 the proposed project and theories were presented. The didactic relationship model of Hiim and Hippe (2012) and the relationship-based experiential learning model of Krogh and Jolly (2013) were explained. Because the students would be organizing activities for the special needs pupils at Straumøy Farm we suggested that they would find these models useful for making their own plans. An underlying motive, for this suggestion was also for us to observe how our students would use the same models.

The original idea was to have the SJH students organize an activity for the special needs pupils on both visits, in cooperation with Anne and Leif. After completion of the first visit experiences would be assessed and used as basis for making new plans for the next visit, six weeks later. The intention was that the SJH students would advance in their ability in leading activities based on the attained skills and competence they had gained from the first visit. In the presentation to the students Lev Vygotsky's theory about the zone of proximal development was explained. They were asked to take a metaperspective look at themselves and as a group, and then regard where they felt their existing competencies were in relation to this project. It was also asked what they felt could be a worthy challenge towards which to strive. They were then to share and be open as to where they felt they stood. The students each had their own particular standpoint and ideas to consider and simultaneously they were to work with the group's interests in mind. They were, together with us, in a collaborative, pedagogical action research project.

Their immediate response was that the assessment of their abilities was too ambitious. In the eyes of Csikszentmihalyi's "flow theory" (2014) the students showed signs of worry, anxiety and arousal (see figure 5.7). The knowledge they had of the farm, the hosts and the pupils was insufficient for them to begin the first day with leading an activity. In keeping with the above-mentioned ideas of Antonovsky we engaged in dialog to discuss their standpoint, and reconstructed the plan in order to come into a comfort zone that presented a meaningful and manageable challenge. The students were given the task to communicate with Anne and agree upon a work schedule with delegated tasks (see appendix 9). Together they agreed that the students would participate as observers the first morning. In the after-snack session they would each work together with one or two pupils and prepare a meal with produce that was brought from SJH. During their work session, Anne would be on-hand as a peripheral participant, ready to help if necessary. The students were given freedom to choose the menu. When this agreement was made clear it was interesting to observe the change in involvement. It was almost like hearing air being released from an overinflated pressure tank. With a clear, mutual agreement they proceeded into the planning activity with fresh vigor. It was agreed to arrive the evening before the workday, meet the hosts Anne and Leif, and do evening farm chores together in order to establish a mutual sense of place and each other. After chores they planned to prepare dinner together with the hosts and discuss the coming day's plan of action.



### 5.3 First practice period at Straumøy Farm – November 2012

Anne and Leif received us warmly and guided us into activity with the evening chores. It was good to be activated after the long drive and there was a relaxed exposure to what their work comprised. The barn housed a flock of 50-60 sheep, 10-15 cows, heifers and calves, 2 alpaca, two pigs, a flock of hens and a horse. In addition to the farm-production and day school offering for school children with special needs they had established a live-in situation for two handicapped adults. This created employment opportunities for several beside themselves.

This first meeting was uplifting and constructive, and was a strong and positive example of relationship building. They expressed a genuine concern for the entire crew and joined for dinner, which we prepared together, also with produce brought in from SJH. After dinner detailed plans were made for the coming day.

According to plan, the special needs children arrived and the SJH students participated with them in the morning chores led by Leif and Anne. After mid-morning snack we divided into task groups and the SJH students made a delicious vegetable soup and flat-bread, both prepared outdoors over an open fire. The SJH students had either one or two children with them in them during the afternoon task. My role was mostly as participating observer. Anne was always in the background nearby, in tune with Vygotsky's ideas on the value of skilled person on-hand as mediator. The students knew help was there if necessary. Anne demonstrated empathetic qualities in her ability to put herself into an awareness of each student's level of thought and competency. Gunn Imsen refers to this in her description of Vygotsky's zone of proximal development as follows: *The central point is that there exists a thought connection between the teacher and student, that is to say that the teacher must comprehend the student's level and enter themselves into their world of thought* (Imsen 2006 p. 259-260, citing Bråten, my translation).

After the client-pupils returned home we gave each other an hour to retreat and write in our journals, answering the points that were suggested as well as coming with one's own, free reflections from the day (appendix 2). It was agreed upon to meet after dinner together with Anne and Leif to discuss the day's activities and experiences. One conversation involved the inner and outer cycles described in the experiential learning cycle (Krogh and Jolly 2013) and how it related to the day's activities; the outer cycle, with its task planning, execution of the day's activities, masteries and failures and results, and the inner cycle with the individual learning that each experienced. Everyone was eager and involved, reflecting on his or her own, as well as on other's experiences. The conversation was so engaging that it extended over four hours with focus on many aspects of Green Care. At 23:45 we closed for the day.

The next day we packed and cleaned our quarters, thanked our generous hosts and drove the long and winding road back to Aurland. Underway there were many and long conversations about the previous day, and during a 45-minute ferry ride we sat together and took up several

points from our journals. We used this as a reflective method towards planning our next visit in January.

#### **5.4 Second practice period, January 2013**

With the first round of experience behind plans were made for the next visit. Leif and Anne gave the students from SJH an overview of general activities that were realistic to work with in January and the students were given the task to choose from that framework. The students were now more independent and demonstrated that they needed less involvement from their teachers; their 'zone of proximal development' was expanding. They had advanced in their capabilities and took initiative to be creative, organizing much on their own. We had agreed on regular check-ins to keep each other updated on progress and decisions. They were connected to the initiative and seemingly in a work pattern resembling "the flow" described by Csikszentmihalyi (see section 2.5.2.2). Before I knew it they had a program clear for the next visit (appendix 10).

As with the first practice session, we drove from SJH in time to participate in the evening farm chores together with Leif and get "warmed up" for the next day's activities. Compared to the first visit, there was a marked difference in the interpersonal atmosphere from the moment of arrival. The students comfortably met and joked with Leif, and they asked immediately what they could do to help in the barn. An evening meal was eaten together with Leif and Anne and all conversed about pedagogy, education for children with special needs and the value of varied practical work incorporated into learning situations. They commented that in the regular school system there are many teachers who do not see the value of out-of-classroom work activities as an arena for teaching. The conversation was active and continued until late evening.

The last discussion that evening was to go through the plan for the coming day. The students were delegated tasks that they had earlier agreed upon via e-mail. This time they were to be the 'reception committee' for the pupils when they arrived from their respective schools, and they were to delegate the day's tasks, both morning and afternoon. They had also agreed that they would have the children with them the entire day. Leif and his son were prepared to be 'mediating helpers' and, if necessary, assist underway with practical details. At day's end the SJH students were to engage their respective pupils in a routine "assessment conversation", in which they reflected upon and talked through what and how the pupil felt they had experienced that day.



**Figure 5.6: At day's end came the individual review meeting between "teacher" (SJH student) and pupil.**

The practice day began with the SJH students greeting the children as they arrived. They all knew and remembered each other from the practice period in November. One of the SJH students had responsibility to delegate the morning chores, and the other student delegated the afternoon activities. Each of them had their own child to work with throughout the day. The morning activities comprised barn chores, food preparation, carpentry, and starting and tending a campfire. The students at day's end were given time to reflect and write in their journals. We spent another evening together with Leif and Anne, and were again up until late hours in engaging conversation.

The next day marked departure and the end of our project at Straumøy. There was a planned meeting with all present to have a final reflection, and to share thoughts on the importance of on-farm practice for students in general and agriculture students in particular. Ahead of time I had prepared twelve questions (appendix 5), given to Leif the first day we arrived, and agreed that we would talk about them during this meeting. Many of the essential points brought up are discussed in the reflections below.

## 6 Reflections from three perspectives

In this section I would like to reflect on values of this project from three perspectives: the student, the teacher and the farmer. The methods for collecting data were observation, participatory observation, taking notes either on paper or pc, and photography. Eventually all notes were transcribed to pc (see appendices 4, 6 and 7). Afterwards I will attempt to connect the reflections to my research question as to how, in cooperation with the student, I as teacher can assist in creating meaningful learning situations.

### 6.1 Student perspective

This reflection is based upon observations and reflections of what the students experienced and expressed during the planning stages, the visits to Straumøy Farm and the conversations had together during the entire project. Informal and planned conversations, interviews, participatory observation and photography were methods that provided input for judging how the students developed throughout the project. We had organized and planned conversations as a group after each day of activity, and we had dialogues with the students during the planning stages, both in November and in January. In addition, by participating in the entire project, we had ample opportunity to observe at close-hand the interactions and dynamics underway.

The students demonstrated an evolutionary growth from the novice level where they began. In an upwards-spiraling pattern they mastered several tasks, and developed in confidence, drive and willingness to approach new challenges. At the first meeting they emphatically let us know that we expected too much of them. They made clear that their comfort zone was to first engage at an observational level, leading one “safe” activity with a mediator close at hand would be acceptable. One could say that the challenge level for them was high even though the competency level was at a novice stage for the trade. At the same time they were motivated because they saw this as an excellent opportunity to apprentice at one of Norway’s most developed and respected Green Care initiatives. From the beginning they were interested in building their competency and expressed at our first meeting that for the second farm visit they would be interested in taking on more responsibility for organizing and leading even several activities throughout the day.

Antonovsky describes the first reaction from the students as being the sign of a healthy response (Jensen and Johnsen 2000). By expressing that they felt pressed beyond their level of competence showed that they were engaged. Antonovsky explains that persons having a strong feeling of coherence to an activity will express anger if they come into a situation where they feel themselves pressed beyond their coping ability. This reaction demonstrates that they are able to analyze their own position related to the task, to recognize the problems as challenges and find remedial solutions rather than feeling threatened and retreating (Ibid. p. 91). By allowing them to be active in setting the agenda they were then taking on more responsibility for their own

learning. We as initiators listened, encouraged them to come with suggestions and adapted in respect to their needs.

At the last debriefing they agreed that they had experienced little stress and simultaneously increased will and ability to take initiative and responsibility in engaging themselves with activities on the farm and with the school children. One of the students said (TE from appendix 6), *"I felt myself at home as soon as we arrived, and I didn't feel pressed to take on responsibility. I decided to see how things went and, if I felt safe in the situation, just continue... I felt more confident and curious this time around, more open. In reflecting, I could say that it is important with experience if one is to be good at something... I realized that it is important to believe in the child I was working with, even with small things, for example to hit the head of the nail with a hammer. It was a good feeling to give someone else a good experience. The next time I would like to take even more responsibility for planning and leading the day's activities."*

The other student had following comments: *"It helps by taking things as they come, and not having to feel that 'everything' has to be planned for ahead of time, and then to act out from what one sees has to be done."* *"Next time I want to engage several children. Both times I worked only with one. I would like to try to get two of them to work together on one task."*

Anne responded to these reflections saying: *"One has to tread over thresholds in order to come further in development."* She agreed with TE in saying that one has to *"build on experiences piece by piece"*. To TE's comment on being with the child and giving encouragement in hammering nails Leif responded saying, *"It is easier to communicate when one does things together, for one can quickly pick up on small nuances regarding well-being and if things are in order."* They were both very supportive towards the students' development.

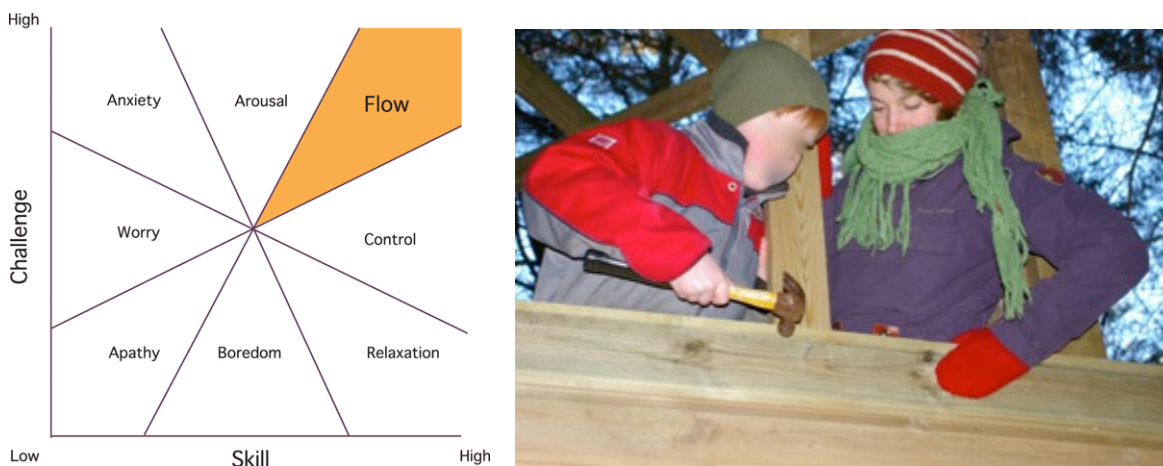
## **6.2 Theories supporting the student perspective**

This form for learning progression is supported by several researchers. Brothers Hubert and Stuart Dreyfus' theory of progression through beginner and intermediate levels towards mastering skills was tested, in which the learner moves through a series of context related cases, and after each case realizes a higher developmental level from novice towards expert (Eilertsen 2013 p. 175). Adapting the project to give the students gradual exposure to increased challenges made it possible for them to build the necessary foundation for taking on more responsibility at manageable levels. Jerome Bruner's ideas of "scaffolding" is illustrated particularly in the reflection of the student that felt that she had built a solid foundation first, both in planning, organizational and social skills, and then felt capable in working more independently at a higher level with more complicated and advanced issues.

Vygotsky's principles about the proximal development zone can be included here as a related theory in that the students, in cooperation with their teacher, or Leif and Anne as competent mentors, worked towards, experienced and extended their zones of competency towards higher levels (Mjelde 2002). They felt comfortable and unpressured by us. It was important for them to

gain experience, and they learned through being actively engaged in the project. In theories described by Jean Lave and Etienne Wenger, we were all participants in a form for collective learning that finds place where folk are gathered to strive towards common goals. They were in a “community of practice” with many actors, activities and social interplay (Smith 2003, 2009). There were many issues that could be connected directly to competency levels, both from the subject curriculum and the core curriculum of general competencies for all education levels in Norway ([www.udir.no](http://www.udir.no)).

Reflecting on what both students said; one that, *“It was a good feeling to give someone else a good experience. The next time I would like to take even more responsibility for planning and leading the day’s activities.”* and the other, *“It helps by taking things as they come, and not having to feel that ‘everything’ has to be planned for ahead of time, and then to act out from what one sees has to be done.”* *“Next time I want to engage several children. Both times I worked only with one. I would like to try to get two of them to work together on one task.”* demonstrates a good example of Csikszentmihalyi’s ideas on the theory of being in the “flow” of an activity. The challenge was there, along with focus, motivation and the feeling of enough confidence in their own skills that they wanted to go further with new challenges in a related direction.



**Figure 5.7: Illustration of Csikszentmihalyi’s flow diagram** (Csikszentmihalyi 2014) **juxtaposed with student working with a younger pupil with special needs.** She later said, *“I noticed how important it is to show faith in them, even if it’s a little thing, for example hitting the head of the nail with the hammer.”*

Bandura’s theory on learning through observation and imitation was also well illustrated in the progression between the two visits. The students were very observant during the first session, especially when the pupils arrived and were received by Anna and Leif. The second time around the students were given tasks that Anna and Leif had done during our first visit, for example meeting the pupils and delegating the day’s tasks before and after lunch, and then reviewing with each pupil at the end of the day.

### 6.3 Teacher’s perspective

*“One of a teacher’s most important and difficult tasks is assuring that the education is suitable for each individual student”* (Hiim & Hippe, 2012 p. 41). Foundational in teaching is creating opportunities for learning and for students to experience accomplishment or mastery towards

goals both that they set for themselves and that are related to their vocation or curriculum. Ehrenfried Pfeiffer, both a pioneer in the development of ecological and biodynamic agriculture as well as a researcher in the development of the human being, stated: *"The human being, who guides and directs the beginning, the course and the end of the natural growth process, is the strongest force of nature. His (or her) capacity is the final decisive factor"* (Pfeiffer 1899-1961). This quote is a strong reminder of the magnitude of a person's role in nature. Though originally intended as a statement about the farmer's role as nurturer it can well include the relationships amongst people. Especially, the role of teacher, who in essence is a form of gardener, caring and nurturing throughout the time they are together, is a decisive factor in the growth process of the student.

In the Straumøy project we worked in partnership with the students so that they would experience a growth process. As explained in the theory chapter, action research was chosen as a strategy for approaching the work. This involved strong engagement in working "with" the research subjects consistent with values that strengthen the relationships between the partners (McNiff and Whitehead 2012). According to one of the primary founders of action research, Kurt Lewin, an essential principle in action research is democratic process and that action researchers must engage themselves in and with the group that are the research subjects in efforts together to solve the problems in question (Gjølterud 2011 p. 54-56). The project chosen was relevant for the students. We strove to share pedagogic and didactical knowledge and include the students in the learning-theories that we ourselves were using to design and fashion the project. They became aware that they were also "action researchers" in their own right, using this project in helping them investigate elements of what might be part of their own future vocation.

The project was introduced deductively with a short introduction about the experiential learning cycles of Jolly and Krogh, Hiim and Hippe's model of didactical relationships and Vygotsky's theory on the zone of proximal development. We wanted them to quickly come into defining their own goals and enter the planning phase in order for them to sense an ownership to the process. They were central in the planning, enacting and reflecting on each round. The democratic process at all stages, though we took initiative to steadfast dates and some of the outer framework, involved them in the project with nearly equal voice. Our role as leaders was to initiate, guide, work together with, and underway help the students evaluate their own learning. This created a situation in which the students, by working with similar learning and didactical theories as us, learned themselves to put their own concepts of learning into terminology used in the professions of Green Care, education and farming. Gjølterud and Krogh (2008 p.24) relate to this in saying: *"The advantage of going from practice to more general theories is that students more easily gain an 'ownership' to the technical terminology because it was directly related to the content from their own experiences and use of their own informal terminology."*

It was also important to be alert to the learning process and to be ready to change course if necessary. As mentioned earlier, the first meeting with the students resulted in altering expectations of the responsibility they could manage during the first visit. In reflecting on curriculum goals for PPU- students this put many of the qualification-skills of a teacher to test. Didactical skills were tested in that we had to reevaluate and restructure the sequence of activities to take better consideration to the students' abilities. Social skills were practiced in listening to and working with the students, their teacher, the school administration and the farm hosts. Skills of adaptability were challenged on several occasions, particularly when the students meant that in the introductory meeting with them we had too high expectations for their responsibilities on the first trip to Straumøy (Framework for PPU 2003 p. 12).

Directly related to this, Hiim and Hippe state:

*Critical analysis and reflection over that which happens in the learning process, is a prerequisite for developing competency in didactics. Reflection over learning makes it possible to learn to learn, and as an aid in reflecting the student can use the didactic categories in the relationship model (figure 5.4). They can be encouraged to evaluate objectives in the curriculum plan, and analyze objectives in view of their own qualifications and vocational interests. They can in cooperation with the teacher be stimulated to choose subject content and tasks that attend to both curriculum objectives and to their own interests. Even more, the student can learn to evaluate their own and each other's work based on central professional objectives and criteria. Such competency about the act of learning is also an important aspect of the student's vocational expertise. It does not come by itself, but must be learned through hard work. The teacher has an important role in the development of this ability (My translation from: Hiim & Hippe 2012 p. 39).*

Thus in looking at the thesis question, making the student aware of their own learning is one of the ways in which the teacher can, in cooperation with the student, create meaningful learning experiences.

#### **6.4 Perspective from the farm host**

In appendices 4, 6 and 7 are written notes from the conversations had with the hosts Anna and Leif. There were several occasions for informal conversation and interaction. It was interesting to observe their ways of working and coordinating activities, both on their own and also in cooperation with each other, their pupils and all of us from SJH. It was obvious that they were skilled and experienced. In addition to what they showed of their own skills they also showed a fascination in following what the SJH students were experiencing. It seemed that being able to share their work with others having a genuine interest in what they were doing was stimulating for them.

During the evening gathering after dinner the first thing Leif said was, "It was fun to see how you (the students) were 'in place' and that the children were happy to see and be with you!" "This time



*you were in one group and had much more focus.”* When one student said that she was more confident and curious the second time around, Leif reacted, *“I noticed that well, that was nice to see.”* Anna said, *“It’s important to participate in the work and not be a bystander. By working together one can be aware and considerate of the other’s needs.”*

Hiim and Hippe pose the question: *“Can upper secondary vocational schools offer practice situations that are in line with the demands of the education? Can the schools alone lay the first foundation in educating good practitioners? Cooperation between school and the workplace are a necessity for a vocational education”* (Hiim and Hippe 2012 p. 102). Many of the experiences from the project with Leif and Anna at Straumøy Farm would not have been possible in the school setting at SJH. In the interview with SJH administration, one of the veteran teachers, Olav E., when discussing the main reasoning for establishing on-farm practice sessions, meant that the farms chosen should give opportunities to the students that the school has difficulty satisfying. The experience provided at Straumøy was an outstanding example of fulfilling this need. In a broader perspective it should be a priority to connect school-based agriculture education with real farms, both for the student’s sake, but also for the school’s and, perhaps equally important, for the farmer’s sake as a way to expand their network and their feeling of pride that others have appreciation and for their work.

Connecting to this topic of the working farm’s role in the education process of agriculture students are also the theories presented by Saugstad, Nielsen and Kvale, in their discussions about learning landscapes (Nielsen and Kvale 2003). Saugstad’s description about Aristotle’s theories on differences between, but equally weighted, theoretical and practical knowledge, illustrates the strengths of both learning arenas. At the school the students were able to explore established theories of learning and organizing, make plans and reflect on the process underway. At the farm provided experience in the diversity of possibilities that arise in a social setting, with many variables that demand immediate flexibility and judgment as to how to react in an appropriate manner, and where the ‘answer’ need be resolved in the moment. In this interface the persons involved go into themselves to find a solution. To restate words of Aksel Hugo in his article on *Being and Becoming a Genuine Teacher* (or other professional): *“it is precisely through this process of living in the unresolved...(where) you have the condition for the development of your way of being (your genius), your style of acting”* (2012 p. 8).

The ‘communities of practice’ exemplified by Lave and Wenger (Smith 2003, 2009) and Hugo in figure 2.1 (2012) are exemplified in this case study. This is one of the main reasons that SJH integrates the school farm as the school’s most important classroom, in order to have the practice arena close at hand. Yet practice on a full-fledged farm with professional farmers as role models, instead of the teachers from the school, provides invaluable reality experiences for the students and also enables them to begin establishing a professional network

### **6.1 Peripheral farm hosts**

In addition to the case study, in connection with my first assignment in this master study, I sent the same questionnaire as was used in the interview with Leif and Anne at Straumøy Farm to three other farms that have experience with apprentices or SJH students in practice. The questionnaire was accompanied by a cover letter (appendix 9) explaining the master study. One of the farms did not respond. One farm responded via e-mail, and the third farm I was able to visit and interview the three farmers responsible for the different lines of production. The responses to the questionnaires and interviews, including Straumøy, are collated in appendix 4.

## **7 Reflections on strategy and methods**

### **7.1 Reflections on strategy and research methods used in case study at Straumøy Farm**

The strategy of action research seemed appropriate in relationship to the research question. There were occasions when I wondered if I was on the right path in the research, especially if there should be more quantitative data. Reviewing McNiff's booklet (2002) gave encouragement that qualitative research was fitting to my questions of concern. In actuality the research question made several changes during the course of study, in itself validating the nature of action research's repeating cycles in which change is indicative. Originally I had a question that was directed towards how to integrate practice on real farms into the curriculum at SJH. My final question evolved to how, in cooperation with SJH students, I could help create meaningful learning situations. Practice on real farms need be a part of a school-based curriculum, but seeing that needs vary from student to student I decided to try finding a question that was more directed towards finding a way to help each student better find his or her way forward towards mastery from their own standpoint. I was also juggling too many hot coals at the same time and needed to simplify my focus onto the 'grain of sand' that incorporated the essentials. Even though the research question evolved I feel the research strategy remained relevant throughout the study.

The methods of research described in chapter 4 are to a large degree participatory observation, journal writing, and use of subjective questionnaires, interview/dialog and photography. In the case study I did not use 'world café' as a method, though during the course of the year I have attended three meetings that have utilized the world café technique for gathering input from participants interested in farm-based education. I feel that the combination of these methods created a broad degree of angles providing insight into the research question. Through participatory observation I had close contact with the individual students. I was able to observe how they were interacting with the environment at hand. I was also able to observe the farm hosts' interactions with the SJH students and their pupils with special needs. We had time to speak one-on-one as well as in groups and we were able to make adjustments underway, depending on the questions, observations and needs of one another. The student journals

(appendix 2) and my own (appendices 1, 6 and 7), written after completing each day's activities were helpful assistance in discussions, for making plans and for the reports written by both students and myself.

The questionnaire I gave to the farm hosts at Straumøy (appendices 3 and 6) provided a basis for an interesting formal interview and dialog on our final day of the second session. This interview, together with the informal discussions we had each evening provided much inspiration and input to the successful outcome of the project. Photography enabled capturing interactions and atmosphere between people.

## **7.2 Reflections on use of skills checklists as instrument towards guidance**

I began too late in the course of this master's thesis in order to gain full benefit in researching the value of using these checklists. Due to time limitations it was difficult to interview each student, but it was important for my own development to follow up enough of them to get some insights into how the checklists were working. I did manage to have meetings with four students who were diligent to fill out the lists, yet were unsure as to direction. In meeting with them it became evident that each of them wanted to learn everything possible, at all conceivable levels. They had checked off nearly all of the topics on each list. This reminded of the 'kitchen sink syndrome' described above. (Silverman 2005 p. 80). They needed to prioritize and this was difficult. I could guide them, but wanted them to make the final decisions, in order for them to feel the connection towards finding their own path. Prioritizing became an issue, and with that I decided to make a final list asking each student to inspect and choose from each of the subjects, that which was most important for them. This provided a key towards finding an appropriate practice farm; it eased my work in guiding, and it helped them move a step further in better knowing themselves and what was an important focus for this particular practice period.

We achieved progress by finding out first what was possible to experience in April, and then choose a geographical area of interest, type of farm and realistic productions for them to pursue. We whittled away at different possibilities by first identifying potential farms and then inquiring with the farmer. Some students were too timid to contact the farmer themselves and asked for help; others initiated contact without first me being informed. This indicated different levels of development for each student; that they had varying needs and capabilities. To ensure that each was to have a meaningful learning experience it was important with more or less close contact. Certain students were so unsure of what they wanted, or were in such a socio-psychological situation that it was best for them to have their practice period at the school farm at SJH; at the school they could live and work in familiar conditions with staff members understanding their situation.

The students were active in the decision-making process; they were working on identifying their own interests, identifying the type of farm and then contacting the farmer themselves in order to agree on a practice period. In reflecting on Krogh's taxonomy of sequential learning

relationships (figure 2.5.1) I feel that these lists helped the students first connect with their feeling for what inspired them, and then once connected, engage their will in search for the farm that could satisfy this inner interest. Those who were very clear as to what they wanted were simultaneously the most motivated to find their own farm, initiate contact and independently make their own travel arrangements.

In order to engage the cognitive process in their work, and to encourage them to reflect on their experiences, they were given an assignment of writing a report of their stay including a description of the farm, the farmers, the daily activities in which they participated and a final summary/reflection and recommendation as to whether or not that farm should be added to or remain on SJH's list of potential practice farms. The summaries are posted in appendix 11. There are some very interesting comments and all of the students that have delivered have had a positive, though short, internship. Here are a few quotes:

*From Sofia: Generally I have had an incredibly exciting and educational week at Fokhol. It has been hard, but I think it has also given a realistic picture of how it is to work on a farm. Rune was an inspiration. I have become inspired to learn more about biodynamic farming... workhorse breeds... and learn about more ways to work with draught horses...*

*From Aske: I am really satisfied with the practice period at Olavsbråten. It was educational at many different levels. First of all it was great to see a farm in the upstart stages after a generation shift, especially to see enthusiastic, young people hard at work. I worked the land with tractor, learned about procuring funding for new buildings, and experienced a social resonance that made the internship positively memorable.*

*From Jon Ivar: I had an excellent and eventful stay at Avdem. Most interesting was getting deeper insight into cheese-production. I wish I could have been there longer. It was also interesting to see how they had designed and equipped the cow barn. I had a great stay... The next practice period though I would like to experience another farm.*

*From Renate: I had a fine week and enjoyed being on a small west-Norwegian farm. Bente is an enterprising and driven woman with many ideas that she isn't afraid to set out in real life. "This can go fine, you can make it happen if you will!" I'm glad to have been able to follow in her footsteps for four days. Put her on the school's list!*

*From Marthe: I am very satisfied with my practice period with horses here at SJH. It was varied; I tried both new things and developed further what I had learned from earlier experience. It was good to have several consecutive days together with the horses, and to try things out alone, in my own rhythm, as if I grow into the work, as if it somehow becomes a part of the breath. I believe that it can be an advantage in having practice here (at SJH), that it can be a sort of specializing. It is nice also to relate to Janicke and Hannah, who are so skilled and dedicated. Since I don't have much*

*experience, I feel that it is important for me to learn from someone I trust and who are skilled and sensitive to the horse's nature...*

A common thread through most of the comments from the students was that five days of practice was too short. It takes at least a day for orientation and the rest of the week it is important with close contact with the hosts in order for them to feel sure of what to do. For the farm hosts it is not easy for them to know the student's skills and levels of competency. Many of the farm hosts, especially those with well-established routines with apprentices wish to have their apprentices over a longer period of time, partly in order for the time they spend in training the apprentice 'pays off' in the return they provide the farm. Also in a learning relationship in the farming profession, in the spirit of Dreyfus and Dreyfus' five stages of mastering, one often has to repeat tasks many times in order for expertise to develop. In being in one place over a longer period of time also allows for an ascending relationship-based experiential learning cycle (Krogh and Jolly 2012) to occur in several spirals, thus giving all involved opportunities to do, review and to do again with increased levels of competency.

A paradox perhaps is that at the same time the students wish longer practice periods, they also value the school-based education at SJH. In the questionnaire used in the first assignment all of the students responded that they would not have their only training on farms. Responses varied as to amount of time devoted to each base, but all wished to continue with a combination of both (appendix 4). To explore this in more detail could be a subject for a new research thesis.

In respect for practice hosts it was important that they had information about what was expected from the school and that the students were capable enough to manage a normal workday on a farm. We sent a cover letter to each host (appendix 12), but one farmer felt that they needed better guidelines of what was expected both of them and of the students during their stay. It is not always easy to judge beforehand how the student/farmer relationship will develop; on occasion this has been problematic. It is beyond the time-scope of this study to go much deeper into this issue, but I see this as an area for development. In relation to Nielsen and Kvale's article on learning landscapes (2003 and section 2.3.4 in this paper) the domains and dynamics of the school-based learning and practice-based learning need be considered, respected and integrated such that each domain has a clear understanding of their roles in this learning process. In the future I would like the farmers whom we regularly use as practice hosts to also utilize the checklists for two main reasons: 1) to help them become more conscious of what skills and opportunities they have to offer their apprentices, and 2) to help SJH or other apprentice administrator develop a catalog over suitable farms and their resources.

## 8. Conclusion

This work with improving teaching skills is a continuation of a process that started many years ago. Prior to September 2012, when the graduate study at NMBU began, motivation for teaching came as a result of just 'being there', in the practical world of, as Peter Escher encouraged, "*Just do it*". Being a practitioner in farming and gardening and being for many years a practitioner in teaching, experiences rolled on and on, and being a reflective person and enjoying the work, skills developed en route. When the graduate study began it provided an opportunity to go into depth in the world of pedagogical and didactical theories. I discovered quickly that I had 'discovered the wheel' many times anew.

The relationship between work done with the original research question and the strategies, methods and theories discussed above has definitely evolved. There has, however, been a common thread throughout. From originally having more of an outward focus as to how farm-based education could be integrated into the existing school-based regime at SJH the question evolved to having more of an inward focus on how the student-teacher relationship could develop through a team effort in helping the student move towards mastery in a profession, ecological agriculture in my particularly case. The common thread is the need for real practice on real farms as part of their journey towards mastery, and this practice provides the scaffold for supporting theoretical knowledge.

The study evolved towards integration, or building a bridge, between worlds of the student and school-based and farm-based educations, through the eyes and mind of a teacher. The research strategies, action research and case study, seemed appropriate throughout because they encouraged a direct involvement with my interaction with the student subjects. In studying research methods there some that I had expected to use more diligently than it turned out. For example, World Café as method was described in the research and methods chapter, as well as the use of questionnaires. They were used to a certain degree, but time considerations limited them from becoming a method in focus. The questionnaire used in surveying students, farmers and SJH's opinions on pertinent issues was predominantly qualitative and limited to few farms and only the students at SJH. In a further study it would be advantageous to include several farms, students from different agriculture schools and perhaps include a quantitative analysis of a survey group.

The educational and didactical theories explored in this work have seemed pertinent throughout the study. The first year of study gave exposure to many scholars and theories. By the time the final thesis question was formulated it seemed that there was a suitable array from which to choose. Insecurity was how to know how far back into history of the development of specific theories I should go in order to have significant documentation. Theories that were used most in this research are based on ancestors going way back in time.

If I were to engage in this study again I would include the teaching staff at SJH to a larger degree than the two or three with whom I confided. Due to hectic schedules and plenty of work for us all, I did not manage to squeeze in extra meetings and discussions in plenum. I feel that the study's progression and approach functioned well; that the sequence of assignments from NMBU built upon one another towards the final thesis. The study began by our advisors asking us to identify an educational issue that we were 'burning for'. The title of this work reflects this. Doing so encouraged a personal identity, and thereof motivation to the work. This is what inspired me to choose the thesis question that I did; I was basically asking the research subjects to identify learning issues they themselves were burning for. From there they could more easily be guided into the learning landscapes conducive to their growth. There has been an evolution through trial and error, reflection and identifying new issues to bring into the research. Along the way I have had close contact to the SJH students, farmers and other individuals and institutions working with related questions.

Lessons to be learned from this study are many. One is to not be afraid to begin. Another is to find a work ethic that allows time for expression and introspection, for work and rest. It has become quite clear how important it is to pace the work out over time. The preliminary empirical trials and reports were an important foundation for this final thesis; they built upon one another. The most difficult was weeding out the abundance of possibilities and finding the essential aspects that hid themselves in each of them. This is where the aspect of expression and introspection came to help. By writing a journal and taking long walks, by contemplating in evenings after sessions of writing enabled thoughts to ripen and evolve. When in late January 2014 the final decision came to limit the major empirical data to the case study at Straumøy things began to roll and the path cleared. Since then there has been a positive road to travel. Along the entire way it has been useful to meditate regularly on the work by taking a peripheral stance in order to view it from different angles; this was especially helpful when it was "difficult to see the forest due to the trees".

I did gather a fair amount of data that was not used in the final thesis. Until the final thesis question was defined there was a lot of inductive fishing going on. I attended several meetings relating to my questions, both in Norway, Sweden, USA and Portugal. In the States I traveled many kilometers and conducted interviews with farmers, farming educators and farming students. Some of the 'fishing' was successful, but I was in an inductivist stage of my work, searching for a topic that might appear to be the 'question' I was looking for. There is also a fair amount of data that I could have used that was relevant to the thesis. Reasons for them not appearing is due to having to weed out the extra, in consideration to time and space.

Are there implications of this work for policy and practice? This work in the least has resulted in implications for my own policies and practice. In working with these theories of communication, relationship building and didactics, and in working in close contact with helping the students in

their progress I feel that a definitive improvement has occurred. Working together with them, helping them to identify their own direction towards mastering what is important for them has been very inspiring. They have given positive feedback on the helpfulness of the skills checklists, especially with the prioritizing that which is most important for them. They have all completed one round of practice since the checklists were distributed and there was a good match between their interests and the farms chosen. One policy change for me will be to begin early in the school year with having the student survey their own interests by using the skills checklists, and immediately after engage them in dialog. On a broader plain, indications from this study point towards going further with the interface student, teacher, and school-based and farm-based integration of education. I see that the role as mediator can be invaluable also for apprentices engaged in farm-based studies; that they have a person to relate to who has in depth knowledge in their field of interest. As policy or practice I would suggest that all who engage in mediating work as mentor set themselves well into didactical theories; from this both they and their 'students' will benefit.

Other implications for policy might be to encourage the national plan for agriculture education to implement an apprentice practicum as required part of the Norwegian certification in agronomy. Comparable level agriculture education in many European countries requires several months to over a year practicum as obligatory in the study. Perhaps a fourth year could be added on to the existing agriculture education in Norway in which the participants could specialized in a particular area of interest on a farm qualifying for providing this level of training. In this connection to this courses in practical didactics could also be developed for farmers hosting such students. Practice on farms beyond the school and one's own family homestead expands horizons, both for the student and for the host farmer. New ideas enter the profession and the communities where they are located.



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# Appendices to Master Thesis:

## Appendix 1: Logg: Gård som pedagogisk ressurs (Journal for first assignment PPUT 301 master's study at NMBU)

### Mål med arbeidet:

Å forbedre undervisning og læring på SJH ved å eksponere elever til virkelige oppgaver ut i arbeidslivet, i et yrkesområde som har med spesifikke interesser for elevene. Det er et ønske å engasjere elevene i planleggings- og gjennomføringsprosessen slik at oppgaven blir mest mulig relevant og meningsfylt for dem.

18.10.2012

Møte med elever idag. Elevene har valg Inn-på-tunet i Valfritt programfag. Læreren er Cecilie Bugge.

Opgaven som vi ønsker å jobbe med:

- Straumøy Gard som øvingsplass.
- Våre elever er med på et opplegg på Straumøy den 13.11.
- Viljar, Silje og jeg har ansvar for å legge til rette for at elevene får muligheten til å utvikle sine innsikt og ferdigheter innen IPT i et praksisopplegg.
- Noen sentrale punkt:
  - Etablering av læringsarena utenfor skolen
  - Faget er relativt ungt på SJH. Bare i sitt 2. år.
- Organisering av utviklingsprosjektet:
  - 1. Opplevd behov og ønskede situasjon etter endringsarbeid er gjennomført
    - Visjon = ønskesituasjonen
    - Nå- situasjon
  - 2. Forankring av arbeidet
    - Hvor skal arbeidet foregå?
  - 3. Tiltak eller aksjoner
    - Hva gjør vi for å nå den ønskede situasjonen?
      - Planer, vurderinger og iverksetting
  - 4. Vurdering av effekten av aksjonene

### Fremgang

Del 1: Nå- og ønskede situasjonen (elevforutsetninger)

- Møtt først med up-gruppen og enes om strategi
- Møtt elevene og presentere prosjektet med de 4 fasene
  - Engasjere elevene i å være med på å definere behov, deres "nå-situasjonen og den ønskede situasjonen etter de er ferdige med prosjektet/faget.

Del 2: Forankring (rammefaktorer)

- Møte med up-gruppe og bearbeid resultat av første møte med elevene
- Konkretisere hvor, når arbeidet skal foregå

Del 3: Tiltak eller aksjoner

- I samme møte som del 2 kan vi drøfte tiltak, lage planer, finne ut om måter å vurdere på og iverksette handlinger

Del 4: Vurdering.

Møte med Silje:

- Elevene skal være med på å planlegge
- Vi legger føringer for å hjelpe elevene kom igang i 1. runden. I 2. runden kan elevene ha med selvstend i organiseringen og gjennomføring

### Refleksjoner fra møte med elevene kl 10:45-11:30 18.10.2012

Tilstede: Cecilie (lærer), Tuva, Inga (elever), Silje (PPU student) og Nat

Vi møtt IPT-elevene og fortalte om prosjektet for første gang. Silje glemt å stille håret sitt før vi kom på møtet. **J Takk for et nydelig bilde, Nat J Jeg (Silje) lurer på om jeg skal legge igjen lua hjemme når vi skal til Straumøy i november J Gleder meg til bursdagsfeiring, kanskje vi kan pynte oss litt da? J** Viljar var ikke her, men kommer neste uke for å fortelle mer om IPT på Straumøy. Spørs om hvordan håret hans ser ut! Når han kommer blir det lettere å få fram hvilke rammefaktorer vi har å jobbe med.

- Brukte erfaringslære- modellen med gjentatte omganger (2 i vårt tilfelle).
  - 1. omgang ble det tydelig at PPU-studentene må ha et tett engasjement med SJH- elever.
  - 2. omgang satser vi på at elevene har ferdigheter til å gjøre mer av planlegging og gjennomføring på egen hånd.
- Datoene for opplegg på Straumøy: 12.-14.11.2012 og igjen med tilsvarende antall dager i uke 3.
- Brukte didaktisk relasjonsmodellen som måte å organisere dette på. Den kan brukes både av oss for planlegging mot våre elever på SJH og av SJH- elevene i sin planlegging for brukere på Straumøy
- Brukere på Straumøy i november blir elever fra flere trinn i grunnskolen som skal besøke Straumøy den dagen. Forslag fra Silje og Nat om aktivitet for brukerne var noen foredlingsoppgaver (saftpressing, melkesyregjæring av gulrot, baking...) Tuva og Inga ble oppfordret til å tenke på hva de kunne ha lyst til å gjøre for aktivitet, men vi lar dette stå åpen til neste uke. **Inga kan kanskje ha større utbytte av å observere de to personene som bor på gården da hun virker som hun ikke er så interessert i å være med elevgruppen. Det er mulig hun kan legge til rette noen aktiviteter for dem? Jeg prøvde å poengtere at det pedagogiske utviklingsprosjektet er en prosess der en erfarer gjennom å planlegge, gjennomføre og evaluere for deretter å forbedre (dersom det trengs J ), og gjenta prosessen. Det er ønsk om at de skal lære ved å arbeide og samarbeide gjennom denne prosessen. Utveksle erfaringer og tanker. Jeg tror Inga kan gå med på å arbeide med elevgruppen når hun får informasjon om elevene (elevenes læreforutsetninger) da hun følte det var mye som var ukjent. Jf. Det Nat skrev ved \* .**
- Etter gjennomført 1. omgang den 13.11. satser vi på å ha evaluering samme kveld slik at vi kan begynne med ideer til 2. omgang i januar. **12.01 til uke 3. Uke 2 er Did-samling og uke 3 er Ped-samling. Nat har hørt at vi kan benytte denne uken til det pedagogiske utviklingsprosjektet. Vi oppfordret SJH-elevene til å være bevisst på datoene. Passer datoene for Viljar?**

#### **Egenevaluering av opplegget idag:**

**Nat:**

- Jeg følte at vi fikk idéen greit fram. Vi hadde god dialog med elevene og Cecilie og det var viktig at elevene fikk si sine meninger og komme med spørsmål.
- Med utgangspunkt i læreforutsetninger for våre elever ble det tydelig at de er ulike mellom begge to. For at opplegget skal være meningsfylt, nok utfordrende og ikke for utfordrende for begge må vi vente til Viljar er med. **\*Begge var skeptisk til å få for stort ansvar for opplegget med en brukergruppe som de ikke kjenner og på et sted som de ikke kjenner. Dette skal vi ta hensyn til. Jeg snakket med de på Otternes, etter møtet, og det kom også tydelig frem da. Jeg tror de ønsker å observere mest i november. Det er bedre å være trygg på det en skal gjennomføre, sa en av SJH-elevene. Da blir det også en positiv erfaring, noe som er ønskelig J**
- Neste uke må vi prøve å få på plass mål, rammefaktorene, læreforutsetningene for begge brukergrupper (SJH- elever og Straumøyingane). Etter at de er på plass kan vi begynne på innhold og læreprosessen i tett samarbeid med og innvirkning fra SJH-elevene **Viktig punkt, bra skrevet Nat. Dette blir bra J**

**Møte 23.10.2012 kl 16:30-20:00**

Tilstede: Silje, Viljar, Nat

## **Tema: Planlegging av 1. opplegg på Straumøy**

Vi møtt hjem hos meg for å lage strategiplan for 1. opplegg på Straumøy den 12.-14.11.2012. Mye av diskusjon gikk ut på rammefaktorene på Straumøy de dagene og om hva vi vil for at SJH-elevene får en lærerik dag.

### • Rammefaktorene:

- ca 8 elever kommer trisdag den 13.11. fra ulike grunnskoler fra 4 kommuner. Deres forutsetninger varierer men alle har behov for tilrettelagt opplegg. Det er noen følgepersoner som kommer med elevene + de som jobber på Straumøy. Med oss fra SJH blir det 5 ekstra voksne.
- Det er et rutineopplegg for klientelevene i fjøsstell fra kl 8:30- ca 10:30. Deretter lunsj og om ettermiddag åpnes det for ulike oppgaver i mindre grupper.
- Oss fra SJH har lite forutsetninger for å komme inn og lage et opplegg for elevene som kommer til Straumøy.
- Hva kan være lærerikt for våre elever?
  - Forslag:
    - At de går inn som deltakende observatører og er med på oppgavene i fjøset, lunsj, og ettermiddagsoppgaver.
    - De får oppgaven til å gå inn i arbeidet med innstilling at de skal i framtiden lage opplegg for tilsvarende kundegruppe.
    - Før vi reiser til Straumøy kan vi ha en time med elevene våre og gi dem innføring i en metode for å planlegge et undervisningsopplegg, nemlig "didaktisk relasjonsmodell".
    - Etter dagens økt med klientelever på Straumøy kan elevene vår ha en time alene, der de noterer det de har observert/opplevd i forhold til følgende punkt:
      - Læreforutsetninger: klientenes ståsted, utfordringer, faglige interesser...
      - Mål med dagen eller hver økt:.....
    - Rammefaktorene:
      - Rom/sted:
      - Utstyr:
      - Plasering av utstyr:
      - Tidsramme:
      - Din kompetanse:
    - Læringsmål for klientene
    - Innhold for dagen og læreprosess
    - Vurdering av hvordan dagen var for klientelevene
    - Vurdering av hvordan dagen var for deg selv.
  - Forslag for oss: at vi gjør det samme refleksjon ved slutten av dagen som våre elever gjør.
  - Etter 1 times refleksjon for hver av oss kommer vi sammen og deler med hverandre og lager et forslag til hva som kan gjøres til neste runde.
  - Det er og ein mogleghet at sjh elevane kan ha ein samtale med Anne og Leif på Straumøy Gard for å høyra på erfaringane deira om å starta/driva eit ipt tilbod. Kan høyra med sjh elevane om det er eit ønske. Eg tok meg friheten til å bruka blåfargen – Viljar

## **Møte 25.10.12 13:00-14:00 SJH**

**Tema:** Planlegging og diskusjon rundt opplegget på straumøy gard 12-14 nov

**Tilstade:** Silje, Cecilie, Tuva, Inga og Viljar

Vi møtte elevane frå sjh for å diskutere korleis me skulle gjennomføre eit eventuelt opplegg på Straumøy Gard

Viljar byrja med å forklare kva han, Silje og Nat hadde på førehand tenkt. Dette gjekk ut på at elevane kjem til garden og oserverar og deltek i eit normalt opplegg med butiltaket og skuledelen (tirsdag)

Det virka som elevane blei meir trygge på dette opplegget, da dei følte det ville vere for usikkert å ha noko stort ansvar første gongen. Det blei og snakka om å lage ei Hokaido suppe i lag med elevane på garden (dei som kjøyrar frå sjh må huske ingredienser) Viljar lova og elevane frå sjh at dei kan ha ein samtale med Anne og Leif om ipt tilbodet.

Me blei viare enige om å reise tidleg på ettermiddagen frå sjh. Opplegget blir planlagd litt meir i detalj på bilturen/ferjeturen til Straumøy. Då skal og dagsplanen for Straumøy ha komme.



## Appendix 2: Loggføring (Daily reflective journal for students participating in case study at Straumøy Farm)

Straumøy, mandag – onsdag 14.-16. januar 2013

I refleksjonsfasen kan det være greit å notere det du har opplevd. Loggføring kan en gjøre ved å skrive en sammenhengende tekst eller i form av stikkord. Det vi ønsker at du lærer er å klargjøre forbindelsen mellom hva du har gjort, hva du tenker og føler.

Det er mange måter å bli bevisst egne handlinger eller sin egen oppførsel, en av dem kan være gjennom hånden. Følgende tabell kan du gjerne notere i loggboka.

| <i>Det jeg og andre gjorde og sa, det flere kan ha observert (objektivt)</i> | <i>Det jeg tenkte, følte og opplevde "inne i meg", men ikke sa "høyt" (subjektivt)</i> |
|--|--|
|  |  |
|  |  |

Det er óg flere måter å komme i gang med en skriveprosess. Dersom det er vanskelig å notere i skjemaet kan du svare på spørsmålene under. Det viktigste er å komme i gang med loggføringen og tankeprosessen. Lykke til!

- Hva gjorde vi i dag? (før opp alle oppgavene du husker og vær objektiv)
- Hva har jeg lært? (Hva ble du oppmerksom på?)
- Hva tenkte du om det som skjedde, det som ble sagt og det du så?
- Hvilke reaksjoner eller følelser vekket det i deg?
- Hvilke verdi hadde det som skjedde, hvordan velger du å forstå og tolke det?
- Hva vil du gjøre med det du erfarte?
- Hvilke litteratur er aktuell for å lære mer om dette?

### Samtalen etter at hver enkelt har loggført:

- Kommunikativ loggbok:
  - Hva gjorde jeg?
  - Hva vil jeg diskutere?
  - Kommentarer (fra lærer)
- Eller vi kan lese fra loggen (direkte sitat) det vi ønsker å dele med de andre.
- Synteseloggbok – (gjort-lært-lurt)
  - Virksomhet
  - Hva er gjort?
  - Hva har jeg lært?
  - Hva er lurt å gjøre?

Kilder: (Johnsen, 1999) og (Bjørke, 2006).

## **Appendix 3: Interview questions to administration at SJH, farmers and students**

### **Spørsmål til SJH (Questionnaire to administration at SJH)**

- Hvilke alternativer eksisterer for praksisperioder innenfor eksisterende rammer?
- Når er de mest aktuelle tidspunkter for utplassering i løpet av skoleåret?
- Hvilke faglige, administrative og juridiske krav må stilles under praksisperiodene til
  - Elever?
    - Læreforutsetninger
    - Kompetansemål og vurderingskriterier
    - Gjennomgang av nøkkelkvalifikasjonene nødvendig for et vellykket opplegg.
  - Skolen?
    - Formidling, organisering, primærkontakt mellom elev og praksisverten (pv), juridisk ansvar, forsikring..
  - Praksisverten?
    - Pedagogisk grunnlag og innstilling.
    - God læringsarena på gården.
    - Politiattest
    - Skikkelig husvære.
- Hvordan kan praksisperioder finansieres?
- Hvordan kan elevene og gårdbrukerne følges opp imens elever er på praksis?

### **Spørsmål til SJH som hører til en utvidet oppgave senere.**

- Hva er hovedutfordringer i forhold til rekruttering av nye elever?
- Om Vg 1 privatifiseres kunne R.Steiner Forbund være en tenkelig aktør?

### **Spørsmål til gårdbrukere (Questionnaire to farmers who are practice hosts)**

- Hva skal til for å styrke landbruksutdanning slik at ferdig utdannede agronomer er i bedre stand til å ta ta ansvarsroller på en gård?
- Hvilke mulighet har p.v. til å ta imot elever i en praksisperiode?
- Er det bestemt tidspunkt/er som passer bedre enn andre?
- Hva har gården å tilby i forhold til praksisplass for elever som er matrikulert i agronomutdanningsprogram? Hva er gårdens "spesialitet eller genius"?
- Hva har p.v. for husvære for praksiselever?

- Kan praksisverten ha 2 eller flere praktikanter om gangen?
- Hvilke forkunnskaper burde eleven ha før de begynne med praksis på din gård?
- Hvilke forventninger har pv til elever som skal ha praksis på sin gård?
- Kan du finne tid til å møte med praksiseleven for å diskutere spørsmål om drift og fag på din gård?

### **Spørsmål til elever (Questionnaire to students at SJH)**

- Når i utdanningsløp er det viktig for deg å komme ut i praksis på en utvalgt gård?
- Hvilke fagområder innen landbruk har du interesse i å fokusere på?
- Hvilke geografisk område er mest interessant for deg?
- Om du kunne velge mellom å lære om landbruk på naturbruksskole eller på en gård som drev med det du er interessert i, hva ville du velge?
- Hvilke behov har du i forhold til økonomi under praksisperioden?
- Hva tenker du å gjøre med denne utdanningen?
- Hvor viktig er det for deg å få utplassering på gård mens du er elev.
- Hva tror du at du kan lære på en gård som er vanskelig å lære på skolen?
- Hva tror du at du kan lære på jordbruksskolen som er vanskelig å få lære på en gård?
- Hvilke holdninger og ferdigheter burde en praksisvert/gårdbruker ha om han/hun skal kunne kvalifiseres som praksisvert?

## **Appendix 4: Summary of questionnaire responses from SJH administration, students at SJH and farmers who responded to questionnaire.**

### **Sammenfatning av spørsmål til elever (Summary of questionnaire to SJH students)**

Dette er en sammenfatning av spørsmål besvarte den 21.01.2013 av 15 elever på Sogn Jord- og Hagebruksskule.

- ***Når i utdanningsløp er det viktig for deg å komme ut i praksis på en utvalgt gård?***
- IF. Når det skjer mye ulikt og spennende på gården (våren?). Gjerne på flere tidspunkt i utdanningsløpet
- MST. Gjennom hele utdanningsløpet. Teori og praksis går hånd i hånd.
- TL. Etter et par måneder
- BSS. Når det er mest mulig å lære.
- LR. Samme for meg når det er praksis men best om det er i sesongen for det de driver med. Gjerne litt inni mellom---ikke alt på en gang.
- ME. Kanskje vår Vg2 og høst og vår Vg3, eller etter utdanning :-)
- JA: Det har vært viktig å hatt praksis på forhånd av begynt skole. Nå blir det viktig å få praksis ikke for langt etter utdanning slik at man ikke glemmer.
- CBS: Mellom Vg 2 og Vg 3 eller etter Vg3. Vil være bra å få litt mer praksis mellom Vg2 og Vg3 for så tror jeg at man vil få mer ut av undervisningen i Vg3, eller skal det være etter Vg3.
- ØWM: Etter utdanningen er ferdig
- IF: Egentlig hele tiden
- SH: Jevnlig - korte bolker hele tida. Slik får en med seg flyten i gårdsdrifta, nye utfordringer, årstider, osv.
- VHO: Når jeg er ferdig her, ganske raskt etterpå.. slik at en får teorien i praksis. Da fester kunnskapen seg bedre. Erfaring er viktig, sammen med kunnskap.
- KVN: Så tidlig som mulig.
- TG: Underveis i utdanningen, som en del av undervisningen.
- BS: Høst ved innhøstingstiden og om våren fordi det skjer mye i landbruket.
  
- ***Hvilke fagområder innen landbruk har du interesse i å fokusere på?***
- Grønnsaker, husdyrhold basert på utmarksressurser, foredling, geit.
- Husdyrhold med geit og sau (utmarksbeite osv), hagebruk og skogbruk.
- Frukt, grønnsaker, skogbruk
- De områdene vi ikke får mulighet til å drive i praksis her på SJH ønsker jeg å bli prioritert i en praksisperiode...slik som høner og griser.
- Frukt, grønnsaker, men også andre ting kan være interessant.
- Å få praktiske ferdigheter innenfor alle sider av landbruket.
- Litt for mange! Husdyr (storfe avhengig plassen jeg skal bosette meg på), åkerproduksjon, frukt.
- Grønnsakdyrking, geit, bier, Inn på Tunet (grønnsomsorg eller gårdskafe). Gardsdrift som tør å gjøre noe annet.
- Grønnsakdyrking, fruktdyrking, urtedyrking og foredling (urtekosmetikk, urtemedisin, helsekost)

- Ysting, frukt dyrking og Inn på tunet.
- Husdyr (geit og sau), kjøtt og melkeforedling, arbeidshest.
- Hest som arbeidskraft, ysting, kyr/geit. Tradisjonelt landbruk.
- Grønnsaker og frukt.
- Plante, grønnsaker og bær.
- Dyr, ysting og skogbruk.

**•Hvilke geografisk område er mest interessant for deg?**

- Fjellbygd. Fint å få praksis på to gårder i ulike geografiske områder.
- Nordmøre fordi jeg har vokst opp der. Jeg må ha tilgang til en vakker fjord og kystområde. Sognefjorden er da når det kjem til fiske!
- Danmark
- Både sør, øst og vest kunne vært interessant. Nordover blir nok litt langt å reise... men egentlig kan jeg tenke meg å prøve litt av hvert.
- Indre Sogn (Lærdal)
- Det ville være interessant med praksis på ulike gårder, østlandet (flate) og brate Vestlandet. Kanskje det er mer fruktbart å være på en gård til ulike tider, da ville ikke geografien spilt så stor rolle for meg. Sjølve gården er viktigere.
- Området er ikke det viktigste, men selve gården, deres kompetanse og drifter.
- Sogn og Fjordane, Hordaland, Østlandet eller Vestlandet.
- Sydligere strøk.
- Vestlandet, evt Trøndelag eller Stange område.
- Europa - kysten fra Lofoten til Portugal.
- Ikke nødvendigvis så vesentlig, men ei liten gård- litt brattlendt og mest mulig knyttet opp mot produksjoner jeg selv kunne tenkt meg.
- Østlandet og høyfjell.
- Nord Norge
- Ikke svar.

**•Om du kunne velge mellom å lære om landbruk på naturbruksskole eller bare på en gård som drev med det du er interessert i, hva ville du velge?**

- Nbskole gir breiere forståing av flere fagområde og flere sammenhenger i landbruket. Flere fagfolk med ulike kompetanse samlet. Har brei interesse for landbruk.
- Skole- fordi jeg får mer faglig kunnskap, men en skole blir ikke det samme som å bu på en gård. Vil gjerne kombinert skolegang med jobbe på gard. En skole er også en bedre sosial arene enn en gård. Når man er såpass ung er det viktig å være sammen med andre ungdommer.
- Gård. Mer praktisk anliggende og ville teorien komme inn på den rette måte for meg.
- Jeg er interessert i å lære litt av alt, siden jeg enda ikke vet hva jeg vil, så det er et pluss til jordbruksskole. Enda en fordel er at man møter andre som befinner seg i samme båt, så man kan lære på en gård er jo alle praksisen. Jeg tror det kan være lite variert på en gård, så jeg foretrekker skole.
- Mest skole. Der får vi også teoretisk opplæring og kanskje mindre sjans for vranglære. Der er det flere elever og lærere. Det kan være ensomt viss du kommer aleine på en gård. På en gård kan du lett bli utnytta, og bli satt til mye ensidig arbeid uten å lære nytt. Men det er jo mye positivt med å gå i lære hos noen som driver med det vi skal lære, så en kombinasjon hadde vært bra!
- Oj, vanskelig valg. Kombinasjon er jo best tror jeg, da får du både se hvordan ting foregår i

praksis men også muligheten til å systematisere kunnskapen og kanskje evnen til å se løsninger som går utenfor din nese... Måtte jeg velge ville jeg valgt å lære landbruk på en gård. Da får man ihvertfall et realistisk bilde på arbeidsmengde og på om man duger til det og kan trives med det.

- Begge deler er veldig viktig, men jeg tror jeg ville valgt skole, pga gjerne mer objektiv undervisning, der man gjør ting på forskjellige måte. På en gård kan det fote være slik at vi bare gjør ting uten noe begrunnelse og kunn på deres måte. Men selvsagt, om bonden er flink til å lære bort og forteller og forklarer kan kanskje spørsmålet drøftes på nytt.
- Jeg ville velge gård, da det er det jeg vil etter utdanningen. Der møter man flere reele problemstillinger som man vil støte på i fremtiden på en gård. Kanskje møter man jo mer "hjerte", for det man driver med, på en gård- er jo både arbeide og fritid, en livstil.
- Begge deler fordi skolen gir dypere forståelse og andre med samme interesse og gården gir mer "real life" praktisk gårdsutfordringer.
- Jeg ville ha valgt naturbruksskole og prøvd å få litt praksis før/etter skoleutdanningen eller underveis. Jeg tror at man kan få en mer allsidig utdanning på en skole og sette seg mer inn i detaljene enn på en gård som ofte er spesialisert på noen få produksjoner og der produksjonene (økonomien) står i fokus. Skolen kan gi en mer allsidig utdanning og også ta opp samfunnsrelaterte spørsmål. Jeg har ofte snakket med elever som tar gartnerutdanning i Tyskland som er basert på å lære i en bedrift (ved siden av skolen) og de var ofte ikke helt fornøyd med å "bare komme inn i arbeidsmåten på bedriften deres (+ at undervisningen var litt dårlig).
- Begge deler. Jeg ville ikke valgt... livet er langt!
- Begge deler! Først må en vel ha en god grunnmur, før en kan bygge huset!?:-) Så kan en jo få materialer ved å gå på SJH, og sette detsammen når man er praktikant... på en slags måte.
- Hmmm, litt vanskelig. Det er vint med teori og praksis i balanse, men jeg foretrekker en gård der de driver med det jeg er interessert i.
- På en naturbruksskole får man lære i et mye bredere spekter enn det man vil på en enkelt gård.
- Jeg vil kunne det grunnleggende på skole men jeg lærer mer på praktiske øvelser, så jeg foretrekker å ha det på gård.

### **1.Hva tenker du å gjøre med denne utdanningen?**

Vil arbeide med matproduksjon, men vet ikke hva, hvordan og hvor. Ønsker jobb gjennom avløser eller praktikantplass for å lære mer og finne ut hva jeg ønsker å gå videre med

Vil bruke utdanning til å drive gård selv og før jeg kommer så langt vil jeg jobbe innenfor landbruk på andre gårder/ansatt?. Jeg vil påvirke landbruksutviklinga i Norge i mer positiv retning siden det er bare 1,8% av yrkesaktive som arbeider i sektoren. Kan jeg, kan andre óg! Det vet jeg ikke.

Jeg er veldig usikker på hva jeg vil, tar ting som det kommer seg:-) Kan tenke meg å reise mye. Reise til andre land og kanskje jobbe innom økologisk landbruk.

Skal overta gård til sommeren. Mest frukt, men mange muligheter. Det er fint å lære "litt om alt".

Enten drive gård selv eller bruke det i undervisningssammenheng. Også for å kunne delta i samfunnsdebatten og opplyse folk om hvor viktig det er å bevare det norske landbruket.

Drive gård eller lignende.

Håper på å få noe praksis etterpå, da det vil være bra å få teorien inn i hender og kropp. Føler at jeg har lært en masse, men agronom i øko-landbruk/bonde blir jeg først når teorien føres ut i praksis. Utdanningen er et kjempe grunnlag for videre læren og til å tilegne seg nye kunnskaper. Vil ha en gård på lengre sikt, men de neste år skal det spares opp litt penger og erfaring.

Ta den med meg videre, se hva som skjer. Kanskje jeg har nok kunnskap til å bli medarbeider på en gård eller kanskje jeg prøver å starte noe selv, eller kanskje bare blir å ha gartner og hagebruk som hobby.

Jeg har mest lyst til å jobbe på en gård enten på heltid eller på deltid og å jobbe et annet sted ved siden av. Der håper jeg å kunne tjene litt penger slik at jeg kan kjøpe meg et småbruk en gang i den lyse framtida...

Produsere mat... drive med dyr.

Bli bonde:-) Ta over gården hjemme, og driv den økologisk.

Ikke svar.

Drive gård

Framover skal jeg ta over en gård og jeg er interessert i matproduksjon.

### **1.Hvor viktig er det for deg å få utplassering på gård mens du er elev.**

Svært viktig! Mest for å få inntrykk av hverdagen og livet som gårdbruker, og for å se ulike praktiske løsninger. I skolen lærer vi ofte om det som er riktig eller best i følge fagboka, men i møte med virkeligheten og hverdagen må bonden ofte finne på egne løsninger og ofte gjøre vanskelig kompromis.

Learning by doing. Mer motiverende å drive med gårdsarbeid enn å sitte ved skolebenken. En får prøvd ut det man lærer på skolen i praksis.

Dette er meget viktig for å få en realistisk innblikk i hvordan en gård blir drevet. På en skole får du presenterte for mange forskjellige ting på kort tid. Hvis du ikke har vært på utplassering under utdannelsen får man nok et sjokk når man skal ut og drive med gård i den virkelige verden.

Jeg synes dette er kjempeviktig, for å bringe videre gammel kunnskap og se hvordan alt fungerer i virkeligheten. Man må få noen knagger å henge ting på, spesielt for oss som ikke kommer fra gård.

Det er ikke avgjørende, men det kan være fint å ha et sted å diskutere det man har opplevd, som i en klasse. Ellers er det relativt mye praksis i Vg 2, så jeg synes idéen om utplassering etter Vg 3 er god. Da kan man være lengre tid sammenhengende og få ordentlig del i hverdagen.

Fint med utplassering, men skolen er bra, så det er ikke viktig for meg.

Ganske viktig. Man blir en liten stund og lærer hvordan de gjør ting. Dette gjør at man får møte mange forskjellige gårder og lærer forskjellige ting.

Se spørsmål 1 :-)

Ikke svar

Det er viktig med utplassering for å kunne koble sammen teori og praksis og kanskje også for å se at ikke all teorien fungerer/blir anvendt i praksis. For meg er det spesielt viktig med utplassering for å få mer praktisk erfaring.

Det er viktig for meg å være på en gård men ikke nødvendigvis å bli plassert der. Jeg har tenkt at det er mitt ansvar å skaffe praksis i det jeg ønsker å fordype meg i, og derfor har jeg skaffa meg det i helger og i ferier.

Som nevnt tidligere. Teori og kunnskap hånd i hånd. Lurt å få se hva slags løsninger som finnes utenfor SJH; da SJH lett blir en "fast" om en ikke har vært borti emnet før. Det finnes like mange løsninger som det finnes bønder! Fint å få litt kontakt med de som faktisk driver en gård og skal få økonomi og alt til å gå rundt.

Mens jeg er elev er det viktig.

Det er viktig å få utplassering når jeg er elev fordi man lærer om hva man utdanner seg til.

Det blir fort mye teori. For å få en fullt og god undervisning er det viktig å gjøre de tingene vi lærer for å få et bedre bilde av alt teori.

### **1.Hva tror du at du kan lære på en gård som er vanskelig å lære på skolen?**

Å måtte ta mer ansvar selv. Å finne løsninger på egenhånd.

Drift, mer fysisk og teknisk arbeid.

Hvordan du får hverdagen til å fungere.

Hvordan ting faktisk fungerer på en virkelig gård er noe man må lære på en "normal" gård, tror jeg.

Hverdagen, dagsrytme. Praktisk erfaring og lokale forhold.

Hardt arbeid, erfaringer, ferdigheter, selvtillit, lære av å sjå og jobbe i naturen (observere)

Mengdetrening og å få perspektiv over ting.

Se spørsmål 4 :-)

Gårdsdrift i praksis

Å jobbe (lengre arbeidsdager, tidspress, at det for bonden ofte handler om å tjene penger). Å få innsikt i arbeidsgangen. Å bli kjent med andre fjøs, men andre maskiner osv. Å jobbe sammen med andre.

Rytmen i gården. De daglige utfordringene. Ensomheten.

Hverdagen sm bonde. Rutinene som bonden. Mangfoldig tenkning... løsningsorientering.

Produksjoner som ikke er på SJH.

Praktisk gjennomføring og organisering.

Praktiske ting

Dt er å trene i bedre praktisk arbeid og du skaper noe. Læring fungerer mye bedre når jeg får ansvar.

### ***1.Hva tror du at du kan lære på jordbruksskolen som er vanskelig å få lære på en gård?***

- 1.Hva som er faglig riktig/forsvarlig framfor hva som er enkelt, praktisk, vanlige løsninger. Tid til å fordype seg i teori og praksis. Mer rom til å feile og lære av det.
- 2.Kunnskap om husdyr, arter, teknikker, sykdommer. Få et bredt spekter.
- 3.Ikke svar
- 4.Å få såpass variert lærespekter er lettest å få på landbruksskole, og for å få garanti at du faktisk lærer noe. Det er et pluss med det sosiale aspektet med likesinnede ungdommer.
- 5.Mye av teorien. Flere ulike lærere = lærer mer (variert).
- 6.Teoretisk kunnskap. Kunnskap om ulike driftsformer, klimasituasjoner, utfordringer. Mangfold av husdyrslag og vekster.
- 7.Litt dypere teori.
- 8.Teorien til det man går å gjøre på en gård, som bonden ikke har tid til å forklare so nøye som på en skole, hvor tiden er avsatt nettopp til det formål. Flere små detaljer. Da jeg jobbet på ulike gårder i Frankrike, manglet jeg den teorien jeg nå har lært på SJH. Så teorien er fantastisk når det koples til praksisen.
- 9.Mer inngående teoretisk kunnskap om alle sidene ved gårdsdrift.
10. Teorien om mange produksjoner, om en helhetlig bilde og om landbrukspolitikk og lovverket.
11. Økonomi i driftsplanlegging. Biologi.
12. Det grunnleggende innholdet. Ikke bare "sånn er det" men "det er fordi at". Det er veldig avhengig fra gård til gård selvfølgelig, men klart at på en skole er det mer systematisert. Skole er noe annet enn en gårdsarena for å lære... ikke først å fremst å jobbe.
13. Teorien bak
14. Teoretiske ting.
15. Landbruksøkonomi, sykdomer, riktig føring. Teori om landbruk

### ***1.Hvilke holdninger og ferdigheter burde en praksisvert/gårdbruker ha om han/hun skal kunne kvalifiseres som praksisvert?***

- 1.Må være motivert til å dele erfaringer og kompetanse. Burde være interessert i eleven sine interesseområde og spørsmål, ta seg tid til å snakke og diskutere og se en gjensidig interesse



- av praksistiden.
2. En bør ha litt erfaring med praktikanter, høg tolegrense, interesse for å lære bort, gjerne helt elementære teknikker.
  3. De skal ha lyst til å gi viten fra seg. De skal ha plan for hva som skal skje. De skal ikke glemme at jeg er på gården bare fordi arbeidsdagen er slutt. Jeg har ikke lyst til å føle meg helt alene i et fremmed sted.
  4. Pedagogisk interesse. De bør brenne for å lære bort faget sitt.
  5. Sympatisk, kunnskapsrik og flink til å lære bort.
  6. Åpen, dyktig, tydelig, kunne sette grenser og være inkluderende.
  7. Å være flink til å lære bort og i det de driver med.
  8. Lysten til å lære fra seg og å ha en elev som vil stille masse spørsmål. Inndra eleven i allsidigheten på gården, gi ansvar til praktikanten slik at personen tar oppgaven på seg. Læringsmiljø hvor eleven må innstille seg på å jobbe like fort som bonden. Gjensidig respekt så bonden ikke bare bruker praktikanten som billig arbeidskraft (litt lønnet praktik, ville kanskje avhjelpe dette!)
  9. Ikke svar.
  10. Han/hun skulle ha lyst og tid til å ta imot elever. Skulle også ha lyst til å lære eleven noe under arbeidet og ent svare på spørsmål av og til.
  11. Aktivt, bevisst forhold til gårdsdrifta. Et minimum av teoretisk kunnskap. Engasjement i formidling.
  12. Ivrig etter å dele sin kunnskap, tålmodig, å vite at en er praktikant for å lære og dermed ta seg tid til å skape forståelse. Ikke tenke at praktikanten skal gjøre alt "driftarbeid", men være åpen for å skape variasjon og en god arena for å spørre/formidle og god kommunikasjon. Dialog mellom praksisvert og praktikant er viktig og viktig å vite om hverandre sin behov og forventninger.
  13. Han/hun må ha lyst til å vise frem og lære bort og ha kunnskap i et fagfelt som er spennende.
  14. Han/hun må være flink til å lære bort og være flink bonde
  15. Bonden burde være en god arbeidsleder og god til å forklare hva vi gjør.

### **Anbefalte gårder/praksisplasser**

1. Anne Karin Hatling i Skjerdal i Aurland
  2. Sissel Sandberg, Hegli gård på Nannestad
  3. Leif og Anne Grutle v/ Straumøy Gård i Sveio, Hordaland
- Pierre Sachot v/ Alm Østre i Stange

### **Sammenfatning av spørsmål til gårdbrukere (Summary of questionnaire responses from farmers)**

Dette er en sammenfatning av intervjuer på tre gårder. Alm Østre på Stange, Straumøy Gard i Sveio og Nordgard Aukrust i Lom. Som kode ved oppføringen bruker jeg vanlig skrift for Alm Østre; *kursiv skrift for Straumøy Gard* og understrekking for Nordgard Aukrust.

- ***Hva skal til for å styrke landbruksutdanning slik at ferdig utdannede agronomer er i bedre stand til å ta ta ansvarsroller på en gård?***
- 1 års praksis etter og ett år før. Å lære teoretisk oppstår lett illusjon av hva det er å drive landbruk. En må ta det trinn for trinn.
- *AG: Ift IPT mange med høyskolutdanning må få landbruksutdanning. Folk som skal bruke gård må ha innsikt i gårdsdrift. Etterutdanning. Vinterlandbruksskole. Modulbasert utdanning på ulike produksjoner i landbruket.*
- *TE: praksis er det beste.*
- *LG: naturbruksskolen må være fleksibel. Må lese samfunnsutvikling og tilpasse seg. Må finne*

nicher IPT, foredling... Ny bønder har ofte en annen utdanning og ønsker seg tilleggsutdanning. Være i forkant av utviklingen.

•CB: fint med kombinasjon med IPT og foredling.

•Eit betre forhold mellom teori og praksis, meire høve til fordjuping og spesialisering mot slutten av utdanninga. Større faglege krav, meire grunder / bedriftsleiar - kompetanse - det vil gje større yrkesstoltheit.

•Hvilke mulighet har du som praksisvert (pv) til å ta imot elever i en praksisperiode? (husvære, organisering av måltider...)

•P: 1 uke...bare komme. De får lite ut av 1 uke. Helst ikke under 3 uker. Vanlig løp er 3 uker. Få dager kan være en frustrasjon og får lite inntrykk. Fellesskap kan være uoversiktlig

•LG: Husvære har de.

•OA: Det har vi høve til.

•Er det bestemt tidspunkt/er som passer bedre enn andre?

•R: hele dagen må de være med.. Årstiden er det bare arbeid i lange økter. Hva er utdanningsutbytte med det? Tidspunkt vår og høsten er mer omveksling, sommeren mer ensidig. Fint om de kom på samme gård vår og høst.

•LG: Passer mindre bra med skolestart pga mye nytt som skjer. Etter høstferien 42 og utover passer bedre. Ting har komt i gjenge.

•LG: elevene må tilpasse gårdens arbeidssituasjon. Etterjulsvinter passer.

•Eg meiner det må vera nokså lange praksisperioder - sidan SJH ikkje har grunnkurs burde det etablerast moglegheit for tilsvarande på eit nettverk av gardar (som vi har prata mykje om opp gjennom tidene).

**2. Hva har gården å tilby i forhold til praksisplass for elever som er matrikulert i agronomutdanningsprogram? Hva er gårdens "spesialitet eller genius"?**

R: driver gården m praktikanter. 1 veke er lite tid. Noen får med ingenting, andre får masse.

E: tar ikke wwoofere i under 2 uker. P: ikke wwoofere under 2 måneder.

Inn på tunet. Praksisplass for elever interessant i å lære og få noe erfaringer med IPT.

TE: Viktig med praksis innenfor landbruk i tillegg til IPT. Agronomisk ferdigheter.

Våre spesialiteter er urtedyrking / foredling, kulturlandskapsutvikling og estetikk, kultur og læring av vertskapsfunksjon.

**2. Kan praksisverten ha 2 eller flere praktikanter om gangen?**

R: begrensninger med overnattingsmuligheter.

S: 2 elever er bra, helst ikke flere. 1 fungerer bra og pga praktikanter som allerede er på gården.

LG: har hatt erfaring. Lurt med to elever, blir mindre trøkk på bonden.

TE: bedre med to.

AG: flere enn to er for mange.

Vi kan ha 2 eller flere - men det er avhengig av korleis rammene er på alle vis.

**2. Hvilke forkunnskaper burde eleven ha før de begynne med praksis på din gård?**

E: Elevene må ha traktor sertifikat

Forkunnskaper: de vet ikke hva som skjer her. Må vise interesse er det viktigste. Lurt å ha litt kjennskap til elevforutsetninger av brukerne på Straumøy. Tar dem med utgangspunkt de har (LG; AG).. Viktig å vite litt om bakgrunn, og interesse.

TE: viktig med dialog før oppmøte.

LG: skolen må informere eleven slik at de har riktige forventninger.

AG: viser dem brødsuffen.

Det er avhengig av plassen praksisen har i utdanningløpet. Praksisperioder tidleg (grunnkursnivå) bør vera nokså forutsetningsfrie - ein meire avsluttande fordjupingspraksis bør vera langt meire krevande, gjerne med eit personleg prosjekt praktisk / teoretisk.

## **2. Hvilke forventninger har du som pv til elever som skal ha praksis på din gård?**

16. Krav er at elevene tar hensyn.
17. R: elevene må være myndige. Alm kan ikke ha ansvar for umyndige praksiselever, men etter VG3 går det an som praksisplas.
18. S: Hvor langt går skolens ansvar ift myndighet og føresette?
19. Interesse og positivitet.

## **2. Kan du finne tid til å møte med praksiseleven for å diskutere spørsmål om drift og fag på din gård?**

16. R: Viktig at eleven opplever hva som skjer. Fungerer ikke bra å bare vise og gå.
17. SD: viktig at bonden har tid til å snakke med eleven.
18. Ja

## **4. Hvor viktig er det for deg å få økonomisk kompensasjon for å ha agronomelever fra SJH i praksis i kortere perioder (1-2 uker) på din gård?**

1. Økonomi: om betaling stilles det større krav på bonden og opplegg. 1 uke er så kort tid at det er ikke aktuelt med betaling.
2. Økonomi: LG: Går på kost og losji. Det varierer hvordan det fungerer, men k og l.
3. AG: en dag er for lite. Mest fjøsstell om vinter, vedlikehold.
4. For så korte perioder er det ikkje viktig, - men eg held praksisperioder på 1-2 veker som lite eigna sett i høve til punkt 1.

## **1. Hvilke interesse og mulighet har du til å jobbe noe i lag med praksiseleven(e) slik at de får lære noe av deg under praksisperioden?**

1. Kan legge opp til noen som har ansvar. Alltid tid til det.
2. AG: Interessant å ha folk som kommer, sosialt. Har erfaring med det.
3. Eg kan ha stor interesse av det, - særleg om det er (jfr. punkt 6) praksis med fordjuping / prosjekt av fagleg karakter.

## **1. Hvilke verdi ser du det er for elever som tar landbruksutdanning å få praksis på utvalgte gårder?**

1. P, R og C alle refererer til Tysklands utdanningssystem der landbrukselever tar 3 år med 4 dager praksis med utplassering og 1 dag teori/uke.
2. AG: Fortsettelse etter ferdig utdanning. Kunne kombineres med kommune..vikar i botiltak
3. Eg meiner at landbruksutdanning utan skikkeleg praksis er ein vits. Ei slik landbruksutdanning bidreg til nedbygging av gardane og manglande yrkesstoltheit. Det blir som å utdanne ein snekker som berre kan å snekre i teorien...

## **1. Har du andre idéer som kan være relevant til denne samtalen eller disse spørsmål?**

**Alm Østre:**

E: intimitet i bondefamilien kan være vanskelig.

C: i tyskland må gården være godkjent og bonden mester for å ha lærlinger.

S: Utdanning mer på gård og samlinger teori på skolen.

### ***Straumøy:***

***Spørsmål om type gårder som praksisgårder:*** LG: Profil, ulike gårder og innfallsvinkler.

*Dialogen mellom praksisvert og skolen, gjensidig behov fra hver side.*

***Spørsmål om kartlegging av aktuelle praksisgårder:*** IF: Fint om SJH kan ha en formidlingsrolle for elever som skal videre ut i praksis.

***Plassering av gård:*** AG: Om IPT er interessant og man skal kjøpe gård er det vesentlig med plassering.

### ***Spørsmål og samtaler rundt IPT:***

AG: IPT nord trøndelag, Hege Erikson, har nettverk der man kan henvende seg. Samme i Akershus. Inne på Matmerk, liste IPT tilbyddere.

LG: IPT-nettverk kan være en god rekrutteringskilde for elever.

CB: botiltak på SG kan være bra praksisområde.

AG: Stor utfordringer med IPT er mange kortvarig avtaler. Botiltak er viktig mtp langsiktighet.

### **Aukrust:**

Vi har veldig mange ideer som er utvikla opp gjennom åra, også gjennom prosjektet Jorunn Barane var leiar for. Men vi har ikkje greidd å få realisert ideane - kanskje det kan oppstå nye moglegheiter gjennom initiativet knytt til Bingn...

## **Sammenfatning av samtalen med ledelsen på SJH (Summary of interview with SJH administration)**

Etter samtalen med rektor og pedagogisk leder 21.12.2013

### **Forslag til praksisperioder:**

Vg2

- Satse på utvikling av praksisperioder i første året med en uplassering i sept/okt månedskifte + en om våren enten før eller under eksamensuke for Vg3
- Ut-plassering kun på utvalgte gårder
- Knytt læreplanmål til ut-plasseringene og har skikkelige avtaler, retningslinjer med praksisvertene og elevene.
- Engasjere elevene i prosessen av å identifisere deres interesser og ønsker ift praksis. Sommerkurs - Vg3 (se referat under fra samtalen med Even Hov og Olav Ellingsen)

•Definere aktuelle arbeidsoppgaver og knytt dem til læreplanmål

•Form og innhold må diskuteres.

Vg3 - vanlig skoleår

- Sommer: sommerkurs vurderes som gullverdt og vi vil fortsette med det. 1 uke i Aurlandsdalen, 2 uker på skolegården og 1 uke skoletur.
- Høst: rikt innhold i eksisterende opplegg med jakt, fisk, marknader...
- Næringsdriftfag etter høstferie: Vurdere kortere økter med ut-plassering/praksis etter avtale med faglærere
- Vinter: Praksisuke i bedrift og knytt til næringsdrift faget.
- Vår: Praksis på SJH skolegård med god oppfølging av faglærere mtp forberedelse til eksamen. Skolegården er gullverdt og koster mye å holde i drift. Vi må ikke bruke skolegården mindre.

Viktig at ut-plasseringene er profesjonelle og at skolen har siste ordet, men at elevene er med på.

Ut-plasseringene skal dekke hul vi ikke dekker her. Identifisere disse. Det er viktig for elevene at

de kommer ut og møter landbruket utenom skolen.

Spørsmål om etablering av Vg 1 ble drøftet. Saken som ble ført i 2010-2011 for å få godkjent Vg1 ble avslått av Staten. Om Vg 1 skal etableres nå på SJH blir det bare aktuelt gjennom en alternativ løsning som, f. eks. privat skole i samarbeid med Rudolf Steinerskole forbund.

## **Samtale med Olav, J. E. og Even om sommerkurs 2013**

- 4 uker
- Vi må forsvare sommerkurset med at det skjer påkrevd oppgaver som ikke kan dekkes ellers i skoleåret.
- Sinjarheim må knyttes til læreplanmål
- Definere innhold under sommerkurset og kople til læreplan
- Identifisere hvilke fag som involveres
- Spørsmål om utplassering og om at den må dekke hul vi ikke klarer å dekke her.

### **Forslag til praksisperioder innenfor eksisterende rammer + litt atåt**

**Appendix 5: Ferdighetssjekklister for utdanning i økologisk and biodynamisk landbruk. (Skills checklists for training in ecological and biodynamic agriculture. These lists are available in english (see footnote 1))**

## **UT I PRAKSIS?**

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## **VEILEDENDE SJEKKLISTER FOR PRAKSISVERTER, VEILEDERE, PRAKTIKANTER OG PRAKSISELEVER I ØKOLOGISK- OG BIODYNAMISK LANDBRUK<sup>13</sup>**

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<sup>13</sup> Disse sjekklistene er oversatt, bearbeidet og tilpasset nordiske forhold av Nathaniel P. Mead med utgangspunkt i sjekklistene fra: *Becoming a Biodynamic Farmer or Gardener: A Handbook for Prospective Trainees*, by Malcolm and Susan Gardner. They may be freely used, shared and distributed with attribution to the Biodynamic Farming and Gardening Association, [www.biodynamics.com/nabdap](http://www.biodynamics.com/nabdap)

## VEILEDNING OG SJEKKLISTE FOR FERDIGHETER I ØKOLOGISK- OG BIODYNAMISK LANDBRUK

Sjekklistene er et viktig verktøy for praktikanter og elever som tar naturbruksutdanning i økologisk- og/eller biodynamisk landbruk. Listene oppfyller flere oppgaver: praksisverter/mentorer noterer hvilke ferdigheter den lærende kan forvente å komme bort i på den praksisplassen; praktikanter/praksiselever og deres mentor bruker listene for å planlegge og dokumentere framgangen; utfylte og undertegnede sjekklister brukes som "vitnemål" for vedkommende sine opparbeidede ferdigheter.

Ferdighetene som er **uthevet i feit skrift** beskriver et **minimum** som eleven/praktikanten burde kunne etter fullført praktikum/skolegang. En praktikant burde beherske hver av disse ferdigheter i minst én av de spesifikke områder (listet i kolonnene). Dette betyr å ha evne til å gjennomføre oppgaven på en pålitelig måte uten tilsyn.

### Veiledning for praksisverter

1. Lag en profil for din gård/virksomhet ved å merke sjekklistene.
  - Gå gjennom følgende sjekklistene og merke av hvilke ferdigheter du har både vilje og kompetanse til å instruere praktikanter/praksiselever på din gård. **Merk relevante ferdigheter med "x" på venstre siden av rubrikken.** Det er ikke nødvendig å ta med alle.  
De fleste praktikanter/elever vil få praksis og opplæring andre steder der de kan skaffe seg erfaringer som de ikke får hos deg.
  - Skriv navnet ditt, men ikke underskrift, og navn på virksomheten nederst på hvert sjekkliste-ark.
  - Send en kopi av denne malen til utplasseringsinstansen, i dette tilfelle Sogn Jord- og Hagebruksskule. Din gårdsprofil vil da bli registrert i skolens nettverksliste som elevene får studere.
2. I samarbeid med praktikanten/praksiseleven skal praksisverten lage et **individualisert sett av ferdighets-sjekklistene** ved å kopiere din mal og bli enige om hvilke ferdigheter som skal jobbes med under praktikantens/praksiselevens opphold hos deg.
  - I møte med praktikanten før de begynner hos deg, diskutere deres læringsmål og hva de kan forvente å lære på din gård.
  - **Tegn en sirkel rundt hvert relevant "x" på en kopi av malene dine** for å indikere akkurat hvilke ferdigheter dere har blitt enige om skal læres/ha fokus på.
  - Fyll ut ditt navn, navn til gården/virksomheten og navn til praktikanten/eleven nederst på hver sjekkliste (**men ikke skriv under enda**) og kopier disse listene til praktikanten/praksiseleven.
  - Endringer kan føres inn underveis etter gjensidige avtale mellom deg og praktikanten/praksiseleven.
3. **Dokumentere praktikantens framgang** ved å merke på de individualiserte sjekklistene.
  - På praktikanten sine individualiserte sjekklistene, **lag inntil tre suksessive "✓"** i den relevante rubrikk etter hver ferdighet er: 1) demonstrert og observert, 2) praktisert under tilsyn, 3) utført på tilfredsstillende måte uten tilsyn.  
Sørg for at praktikanten/ praksiseleven får tilbakemeldinger om deres framgang.
4. Ved oppholdets avslutning, lag et **endelig register av ferdighetene som har blitt lært**:
  - På praktikanten sitt sett av sjekklistene fyll ut alle nødvendige opplysninger, men **uten underskrift**.
  - **Lag to kopier** av sjekklistene og undertegn hver sett. (Dette hjelper å sikre at sjekklistene ikke blir endret i etterkant.)
  - Gi praktikanten begge sett av de undertegnede listene, én til praktikanten og den andre som leveres inn til praktikanten sin veileder.

### Veiledning for praksiselev eller praktikant:

1. For å sikre at den utvalgte gården tilfredsstiller ditt behov for læring og krav stilt fra ditt læringssted, i dette tilfelle Sogn Jord- og Hagebruksskule, se gjennom gårdsprofilene og undersøk om gården driver med aktiviteter og/eller produksjoner som er interessante for deg.  
Avhengig av årstiden og andre omstendigheter kan det hende at enkelte aktiviteter ikke er aktuelle.
2. I ditt intervju eller første møte med praksisverten, se gjennom dine læringsmål og hva du kan forvente å lære og gjøre under oppholdet på gården. Se på sjekklister i lag og sirkle inn de ferdighetene dere blir enige om. I en langvarig praksisperiode er det fint om praksisverten har sin egen kopi av ferdighetssjekklister. Gjennomfør underveisvurdering og gjensidige endringer etter behov. (Under treningsoppholdet legg vekt på å tilegne deg i det minste noen av måla som er i **uthevet** skrift.) Til dette kan veilederen din være behjelpelig.
3. Hold oversikt over framgangen din ved å lage inntil 3 hakk (✓) i respektive rubrikkene etter at du har 1) observert, 2) øvd under tilsyn, og 3) utført oppgaven på egenhånd på tilfredsstillende måte. Under møter med praksisverten kan du sammenlikne respektive sjekklister og diskutere meningene deres om de ulike ferdigheter som du jobber med å utvikle.
4. Når du forlater gården eller praksisplassen, lag to kopier av din praksisverts sjekklister som dere undertegnet. Én kopi skal du beholde og den andre skal leveres inn til ditt læringssted.

### Oversikt av symboler som skal brukes på ferdighetssjekklister:

- Ferdigheten kan læres på denne praksisplass
- ⊙ Ferdigheten vil praktikanten få mulighet til å lære (individuell avtale)
- ⊙✓ Praktikanten har observert demonstrering av denne ferdighet
- ⊙✓✓ Praktikanten har øvd på denne ferdigheten under tilsyn
- ⊙✓✓✓ Praktikanten kan utføre denne ferdigheten uavhengig tilsyn.

NB: På sjekklister "IA" betyr *ikke aktuelt* og "/" betyr *eller*.



# 1. Planteproduksjon og drift

| <i>Emne: Kulturvekst</i>                                  | Vekst-<br>hus<br>kulturer | Grønn-<br>saker | Urter | Korn | Eng og<br>grønnfôr | Bær | Frukt | Skog,<br>tømmer | Annet |
|---|---------------------------|-----------------|-------|------|--------------------|-----|-------|-----------------|-------|
| <b>Ferdighet</b>  |                           |                 |       |      |                    |     |       |                 |       |
| <i>Grunnleggende ferdigheter er uthevet i feit skrift</i> |                           |                 |       |      |                    |     |       |                 |       |
| Produksjon av kompost                                     |                           |                 |       |      |                    |     |       |                 |       |
| Egenkomponerte<br>jordblandinger                          |                           |                 |       |      |                    |     |       |                 |       |
| Grunnleggende<br>jordarbeiding                            |                           |                 |       |      |                    |     |       |                 |       |
| Opparbeiding såbedd                                       |                           |                 |       |      |                    |     |       |                 |       |
| Dekkvekst/grønn gjødsling                                 |                           |                 |       |      |                    |     |       |                 |       |
| Planlegging av frø- og<br>plantebehov                     |                           |                 |       |      |                    |     |       |                 |       |
| Såing på friland/utplanting                               |                           |                 |       |      |                    |     |       |                 |       |
| Vegetativ formering/poding                                |                           |                 |       | IA   | IA                 |     |       |                 |       |
| Radrensing  |                           |                 |       |      |                    |     |       |                 |       |
| Beskjæring  | IA                        | IA              | IA    | IA   | IA                 |     |       |                 |       |
| Vurdere<br>vanningsbehov/vanning                          |                           |                 |       |      |                    |     |       |                 |       |
| Vernetiltak mot frost                                     |                           |                 |       |      |                    |     |       |                 |       |
| Ugraskjennskap  |                           |                 |       |      |                    |     |       |                 |       |
| Skadedyr kjennskap  |                           |                 |       |      |                    |     |       |                 |       |
| Kjennskap til<br>plantesyjukdommer                        |                           |                 |       |      |                    |     |       |                 |       |
| Bedømming av<br>høstetidspunkt                            |                           |                 |       |      |                    |     |       |                 |       |
| Innhøsting/slått/felling                                  |                           |                 |       |      |                    |     |       |                 |       |
| Håndtering på<br>lager/hygiene                            |                           |                 |       |      |                    |     |       |                 |       |
| Loggføring/bokføring                                      |                           |                 |       |      |                    |     |       |                 |       |
| <i>Tilleggsferdigheter:</i>                               |                           |                 |       |      |                    |     |       |                 |       |
| Uttak av jordanalyser                                     |                           |                 |       |      |                    |     |       |                 |       |
| Gjødselplanlegging og<br>forvaltning av jordfruktbarhet   |                           |                 |       |      |                    |     |       |                 |       |
| Dyp jordarbeiding   |                           |                 |       |      |                    |     |       |                 |       |
| Tilleggs gjødsling  |                           |                 |       |      |                    |     |       |                 |       |
| Pollinering   |                           |                 |       |      |                    |     |       |                 |       |
| Dyrking og rensing av eget frø                            |                           |                 |       |      |                    |     |       |                 |       |
| Vekstskifte planlegging                                   |                           |                 |       |      |                    |     |       |                 |       |
| Komponering av egen<br>frøblandinger/samplanting          |                           |                 |       |      |                    |     |       |                 |       |
| Plantevern:<br>ugras/sjukdom/skadedyr                     |                           |                 |       |      |                    |     |       |                 |       |
| Bruk av biodynamisk<br>preparater                         |                           |                 |       |      |                    |     |       |                 |       |
| Annet:  |                           |                 |       |      |                    |     |       |                 |       |
| <b>Praksisvert:</b> _____                                 |                           |                 |       |      |                    |     |       |                 |       |
| <b>Gården:</b> _____                                      |                           |                 |       |      |                    |     |       |                 |       |
| <b>Praktikant navn:</b> _____                             |                           |                 |       |      |                    |     |       |                 |       |
| <b>Tidsrom:</b> __/__/____ til __/__/____                 |                           |                 |       |      |                    |     |       |                 |       |
| <b>Praksisvertens underskrift:</b> _____                  |                           |                 |       |      |                    |     |       |                 |       |

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## 2. Dyrehold

| <i>Emne: Husdyrslag</i>  | Storfe | Hest | Gris | Sau | Geit | Fjørfe | Bier | Annet |
|--|--------|------|------|-----|------|--------|------|-------|
| <b>Ferdighet</b>   |        |      |      |     |      |        |      |       |
| <i>Grunnleggende ferdigheter er uthevet i feit skrift</i>  |        |      |      |     |      |        |      |       |
| Grunnleggende HMS prosedyrer   |        |      |      |     |      |        |      |       |
| Føring og vanning  |        |      |      |     |      |        |      |       |
| Strøing og tilrettelegging husrom  |        |      |      |     |      |        |      |       |
| Stell og renhold   |        |      |      |     |      |        |      |       |
| Flytting/håndtering  |        |      |      |     |      |        |      |       |
| Oppsett og vedlikehold gjerder   |        |      |      |     |      |        | I A  |       |
| Forvaltning av beiteareal  |        |      |      |     |      |        |      |       |
| Fôr: høy, ensilage, rundballer, trekkplanter   |        |      |      |     |      |        |      |       |
| Forvaltning husdyrgjødsel  |        |      |      |     |      |        | I A  |       |
| Produkt håndtering: melking/slinging/egg ...   |        |      |      |     |      |        |      |       |
| Hygienisk etterbehandling av produkt/lagring   |        |      |      |     |      |        |      |       |
| Oppfostring rekrutteringsdyr   |        |      |      |     |      |        |      |       |
| Brunstkontroll   |        |      |      |     |      |        |      |       |
| Loggføring/bokføring   |        |      |      |     |      |        |      |       |
| <i>Tilleggsferdigheter</i>   |        |      |      |     |      |        |      |       |
| Avlsarbeid, bedekking og inseminering  |        |      |      |     |      |        |      |       |
| Drektighetshåndtering og fødselshjelp  |        |      |      |     |      |        |      |       |
| Kastrering/klipping av ull/pelsstell   |        |      |      |     |      |        | I A  |       |
| Helsesjekk/enkel sjukdomsbehandling  |        |      |      |     |      |        |      |       |
| Utvalg av avlsdyr  |        |      |      |     |      |        |      |       |
| Slakting og partering  |        |      |      |     |      |        | I A  |       |
| Bruk av biodynamiske preparater  |        |      |      |     |      |        |      |       |
| Annet:   |        |      |      |     |      |        |      |       |
| <p><b>Praksisvert:</b> _____</p> <p><b>Gården:</b> _____</p> <p><b>Praktikant navn:</b> _____</p> <p><b>Tidsrom:</b> __/__/____ til __/__/____</p> <p><b>Praksisvertens underskrift:</b> _____</p> |        |      |      |     |      |        |      |       |

### 3. Motorisert/elektrisk utstyr og redskaper

| Emne:<br>Utstyr/redskap                                   | Elektrisk        |                              | Utstyr med forbrenningsmotor |                  |           |                         |         |     | Utstyr drevet med lufttrykk | Annet |
|---|------------------|------------------------------|------------------------------|------------------|-----------|-------------------------|---------|-----|-----------------------------|-------|
|   | Hånd-<br>verktøy | Benke-<br>montert<br>verktøy | Sveis                        | Kant-<br>klipper | Motor-sag | Slå-maskin,<br>hagefres | Traktor | ATV |                             |       |
| <b>Ferdigheter</b>  |                  |                              |                              |                  |           |                         |         |     |                             |       |
| <b>Grunnleggende ferdigheter er uthevet i feit skrift</b> |                  |                              |                              |                  |           |                         |         |     |                             |       |
| HMS prosedyrer  |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Førstehjelp rutiner                                       |                  |                              |                              |                  |           |                         |         |     |                             |       |
| <b>Grunnleggende bruk og håndtering</b>                   |                  |                              |                              |                  |           |                         |         |     |                             |       |
| <b>Bruk av brukermanual</b>                               |                  |                              |                              |                  |           |                         |         |     |                             |       |
| <b>Bokføring</b>  |                  |                              |                              |                  |           |                         |         |     |                             |       |
| <b>Tilleggsferdigheter</b>                                |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Bruk av bredd utvalg verktøy og tilkoblingsredskaper      |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Feilsøking  |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Grunnleggende vedlikehold                                 |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Enkle reparasjoner  |                  |                              |                              |                  |           |                         |         |     |                             |       |
| Annet:  |                  |                              |                              |                  |           |                         |         |     |                             |       |

### 4. Levende trekkraft

| Emne: Dyreslag  | Hest | Annet |
|---|------|-------|
| <b>Ferdighet</b>  |      |       |
| HMS prosedyrer  |      |       |
| Påseling/oppkopling   |      |       |
| To-spann/flere-spann  |      |       |
| Vedlikehold av utstyr   |      |       |
| Kjøring   |      |       |
| Pløying og jordarbeiding  |      |       |
| Radrensing  |      |       |
| Tømmerkjøring   |      |       |
| Trening   |      |       |
| Bruk av rundpaddokk   |      |       |
| Bokføring   |      |       |
| Annet   |      |       |
| <b>Praksisvert:</b> _____<br><b>Gården:</b> _____<br><b>Praktikant navn:</b> _____<br><b>Tidsrom:</b> __/__/____ til __/__/____<br><b>Praksisvertens underskrift:</b> _____ |      |       |

## 5. Grunnleggende drift og entreprenørskap

| <b>Ferdighet</b>  |  |
|---|--|
| <i>Grunnleggende ferdigheter er uthevet i feit skrift</i> |  |
| <b>Arbeidsledelse</b>                                     |  |
| <b>Kundebehandling</b>                                    |  |
| <i>Tilleggsferdigheter</i>                                |  |
| Vertskap  |  |
| Imøtekomme og tilrettelegge for skolebarn                 |  |
| Ta imot og tilrettelegge for journalister                 |  |
| Ta imot og tilrettelegge for inspeksjoner og tilsynsfolk  |  |
| Design og produsere nyhetsbrev                            |  |
| Organisere for festivaler og offentlige begivenheter      |  |
| Planlegging og budsjettering                              |  |
| Regnskapsføring   |  |
| Markedsundersøkelser                                      |  |
| Markedsføring og design av brosjyrer/etiketter/emballasje |  |
| Organisering av og tilrettelegging for andelslandbruk/CSA |  |
| Annet:  |  |

## 6. Foredling

| <i>Emne: Mat eller medisin</i>   | Melk | Kjøtt/<br>fjørfe | Fisk | Korn | Grønn-<br>saker | Urter | Frukt<br>og<br>bær | Annet |
|--|------|------------------|------|------|-----------------|-------|--------------------|-------|
| <i>Ferdighet</i>   |      |                  |      |      |                 |       |                    |       |
| Generell matlaging/baking  |      |                  |      |      |                 |       |                    |       |
| Kinning/yusting  |      | IA               | IA   | IA   | IA              | IA    | IA                 |       |
| Konservering/tørking/<br>fermentering  |      |                  |      |      |                 |       |                    |       |
| Safting og pasteurisering  |      | IA               | IA   | IA   |                 | IA    |                    |       |
| Utvinning av oljer og fett   |      |                  |      |      |                 |       |                    |       |
| Pølsemaking  |      |                  |      | IA   | IA              | IA    | IA                 |       |
| Brygging og vinproduksjon  | IA   | IA               | IA   |      |                 |       |                    |       |
| Tinkturer og essenser  | IA   | IA               | IA   |      |                 |       |                    |       |
| Salver   |      |                  |      |      |                 |       |                    |       |
| Annet  |      |                  |      |      |                 |       |                    |       |
| <p><b>Praksisvert:</b> _____</p> <p><b>Gården:</b> _____</p> <p><b>Praktikant navn:</b> _____</p> <p><b>Tidsrom:</b> __/__/____ til __/__/____</p> <p><b>Praksisvertens underskrift:</b> _____</p> |      |                  |      |      |                 |       |                    |       |

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## 7. Grunnleggende bygg- og anleggsferdigheter

| <i>Type bygg- og anlegg</i>         | Snekring | Muring | Maskinering | Elektriker | Rørlegger | Veiarbeid og vedlikehold | Annet |
|-------------------------------------|----------|--------|-------------|------------|-----------|--------------------------|-------|
| <i>Ferdigheter</i>                  |          |        |             |            |           |                          |       |
| HMS- og sikkerhetsprosedyrer        |          |        |             |            |           |                          |       |
| Bruk av verktøy                     |          |        |             |            |           |                          |       |
| Bruk av materialer                  |          |        |             |            |           |                          |       |
| Enkle prosjekter                    |          |        |             |            |           |                          |       |
| Nivellering og prosjektlayout       |          |        |             |            |           |                          |       |
| Lesing og tolking av byggetegninger |          |        |             |            |           |                          |       |
| Utregning materialer og kostnader   |          |        |             |            |           |                          |       |
| Annet                               |          |        |             |            |           |                          |       |

## 8. Håndverk/husflid

| <i>Emne: Håndverk</i>       | Syng/<br>reparasjon<br>og laging<br>av klær | Toving/<br>spinning | Plantefarging | Strikking/<br>vev | Garving/<br>arbeid<br>med<br>skinn | Lys-<br>støping | Kurv-<br>fletting | Annet |
|-----------------------------|---|---------------------|---------------|-------------------|------------------------------------|-----------------|-------------------|-------|
| <i>Ferdighet</i>            |   |                     |               |                   |                                    |                 |                   |       |
| HMS og sikkerhetsprosedyrer |   |                     |               |                   |                                    |                 |                   |       |
| Bruk av materialer          |   |                     |               |                   |                                    |                 |                   |       |
| Bruk av verktøy             |   |                     |               |                   |                                    |                 |                   |       |
| Enkle prosjekter            |   |                     |               |                   |                                    |                 |                   |       |
| Design                      |   |                     |               |                   |                                    |                 |                   |       |
| Annet                       |   |                     |               |                   |                                    |                 |                   |       |

**Praksisvert:** \_\_\_\_\_

**Gården:** \_\_\_\_\_

**Praktikant navn:** \_\_\_\_\_

**Tidsrom:** \_\_/\_\_/\_\_\_\_ til \_\_/\_\_/\_\_\_\_

**Praksisvertens underskrift:** \_\_\_\_\_

## 9. Biodynamiske preparater

| Emne: Preparat  | 500 Humus | 501 Kisel | 502 Ryllik | 503 Kamille | 504 Brennesle | 505 Eikebark | 506 Løvetann | 507 Valeriana | 508 Equisetum | Kulfrøen prep. | Pepper    |              |           | Annet     |
|---|-----------|-----------|------------|-------------|---------------|--------------|--------------|---------------|---------------|----------------|-----------|--------------|-----------|-----------|
|   |           |           |            |             |               |              |              |               |               |                | Ugrass    | Virvelødsdyr | Virveldyr |           |
| Ferdighet   |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Grunnleggende ferdigheter er uthevet i feit skrift</b>   |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Preparering kompost</b>  | <b>IA</b> | <b>IA</b> |            |             |               |              |              |               |               | <b>IA</b>      | <b>IA</b> |              |           |           |
| <b>Røring av feltpreparater</b>   |           |           | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     |               |                |           |              |           |           |
| <b>Kalibrering sprøyteutstyr/sprøyting</b>  |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Protokollføring</b>  |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Tilleggsferdigheter</b>  |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Innsamling/kverning mineraler</b>  | <b>IA</b> |           | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     | <b>IA</b>     | <b>IA</b>      | <b>IA</b> | <b>IA</b>    | <b>IA</b> |           |
| <b>Innhøsting plantedeler</b>   |           | <b>IA</b> |            |             |               |              |              |               |               |                |           | <b>IA</b>    | <b>IA</b> |           |
| <b>Innsamling/"potensering" av gjødsel</b>  |           | <b>IA</b> | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     |               |                |           | <b>IA</b>    | <b>IA</b> | <b>IA</b> |
| <b>Anskaffelse av dyr og dyreorganer</b>  |           |           |            |             | <b>IA</b>     |              |              |               | <b>IA</b>     | <b>IA</b>      | <b>IA</b> | <b>IA</b>    |           |           |
| <b>Tilvirking av preparatet</b>   |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Valg av egnede plasser til henging- og nedgraving</b>  |           |           |            |             |               |              |              |               | <b>IA</b>     | <b>IA</b>      |           | <b>IA</b>    | <b>IA</b> | <b>IA</b> |
| <b>Henging, nedgraving og oppgraving av preparatet</b>  |           |           |            |             |               |              |              |               | <b>IA</b>     | <b>IA</b>      |           | <b>IA</b>    | <b>IA</b> | <b>IA</b> |
| <b>Kvalitetsvurdering av ferdigpreparatet</b>   |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Lagring av preparater</b>  |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Valg av forskings-tidspunkt</b>  | <b>IA</b> | <b>IA</b> | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     | <b>IA</b>     | <b>IA</b>      |           |              |           |           |
| <b>Brenning/forasking</b>   | <b>IA</b> | <b>IA</b> | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     | <b>IA</b>     | <b>IA</b>      |           |              |           |           |
| <b>Anvendelse av "pepper"</b>   | <b>IA</b> | <b>IA</b> | <b>IA</b>  | <b>IA</b>   | <b>IA</b>     | <b>IA</b>    | <b>IA</b>    | <b>IA</b>     | <b>IA</b>     | <b>IA</b>      |           |              |           |           |
| Annet:  |           |           |            |             |               |              |              |               |               |                |           |              |           |           |
| <b>Praksisvert:</b> _____<br><b>Gården:</b> _____<br><b>Praktikant navn:</b> _____<br><b>Tidsrom: __/__/____ til __/__/____</b><br><b>Praksisvertens underskrift:</b> _____ |           |           |            |             |               |              |              |               |               |                |           |              |           |           |

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## Prioritetsoversikt til ferdighetssjekklistene

På denne side lag din egen prioritetsoversikt om hva du har sterkest ønske å utvikle av egne ferdigheter. Denne profilen vil nok endre seg over tid, avhengig erfaringer og ferdigheter som bygger på hverandre. Som hjelp både for deg selv og i forberedelse til samtalen med veilederen din gjør et forsøk på å:

1. Gå gjennom alle sjekklistene og lag et kryss på emnene og ferdighetene som er mest interessante for deg på nåværende tidspunkt.
2. I prioritetsoversikten, før samtalen med veilederen/praksisverten din, lag en prioritert emneoversikt.

### Eksempel

| <b>Planteproduksjon og drift</b> |                     |   |
|----------------------------------|---------------------|---|
| <b>Emne</b>                      | <b>Ferdigheter:</b> | <b>Prioriterte interesser</b>   |
| <b>Frukt</b>                     |                     | Beskjæring, poding, biologisk mangfold, pollinering   |
| <b>Grønnsaker</b>                |                     | Planlegging frøbestilling, planteoppal, opparbeiding av såbedd, tomatproduksjon, vernetiltak mot frost. |
| <b>Urter</b>                     |                     | Medisinske urter, vegetativ formering, innhøsting og tørking  |
| <b>Kompost</b>                   |                     | Har lyst å lære alt mulig om kompostering   |
| <b>Husdyr</b>                    |                     |   |
| <b>Emne</b>                      | <b>Prioritet</b>    | <b>Prioriterte interesser</b>   |
| <b>Ku</b>                        |                     | Melking, håndtering og flytting, gjerdning  |
| <b>Gris</b>                      |                     | Bruk av gris til jordarbeiding, fôring, avl   |
|                                  |                     |   |

### Mine prioriteringer

| <b>Planteproduksjon og drift</b>                |                     |                               |
|---|---------------------|-------------------------------|
| <b>Emne</b>                                     | <b>Ferdigheter:</b> | <b>Prioriterte interesser</b> |
|   |                     |                               |
|   |                     |                               |
| <b>Husdyr</b>                                   |                     |                               |
| <b>Emne</b>                                     | <b>Ferdigheter:</b> | <b>Prioriterte interesser</b> |
|   |                     |                               |
|   |                     |                               |
| <b>Motorisert/elektrisk utstyr og redskaper</b> |                     |                               |
| <b>Emne</b>                                     | <b>Ferdigheter:</b> | <b>Prioriterte interesser</b> |
|   |                     |                               |
|   |                     |                               |

| <b>Levende trekkraft</b>                         |  |
|--|--|
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Grunnleggende drift og entreprenørskap</b>    |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Foredling</b>                                 |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Grunnleggende bygg- og anleggsferdigheter</b> |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Håndverk/Husflid</b>                          |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Biodynamiske preparater</b>                   |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |
| <b>Annet</b>                                     |  |
| <b>Emne</b>                                      | <b>Ferdigheter: Prioriterte interesser</b> |
|  |  |
|  |  |



## Appendix 6: Intervju på Straumøy Gard (Interview at Straumøy Farm)

### Straumøy intervju 16.01

tilstede: Leif Grutle (LG), Anne Grutle (AG), Viljar Grutle (VG), Silje Djupvik (SD), Cecilie Bugge (CB), IF, TE Engebretsen (TE), Nat Mead (NM)

Spørsmål om praksisperioder fra SJH til gårdbrukere

1. Hva skal til for å styrke landbruksutdanning slik at ferdig utdannede agronomer er i bedre stand til å ta ansvarroller på en gård?

AG: Ift IPT mange med høyskolutdanning må få landbruksutdanning. Folk som skal bruke gård må ha innsikt i gårdsdrift. Etterutdanning. Vinterlandbruksskole. Modulbasert utdanning på ulike produksjoner i landbruket.

TE: praksis er det beste.

LG: naturbruksskolen må være fleksibel. Må lese samfunnsutvikling og tilpasse seg. Må finne nicher IPT, foredling... Ny bønder har ofte en annen utdanning og ønsker seg tilleggsutdanning. Være i forkant av utviklingen.

CB: fint med kombinasjon med IPT og foredling.

2. Hvilke mulighet har du som praksisvert (pv) til å ta imot elever i en praksisperiode? (husvære, organisering av måltider...)

LG: Husvære har de.

3. Er det bestemt tidspunkt/er som passer bedre enn andre?

LG: Passer mindre bra med skolestart pga mye nytt som skjer. Etter høstferien 42 og utover passer bedre. Ting har komnt i gjenge.

LG: elevene må tilpasse gårdens arbeidssituasjon. Etterjulsvinter passer.

4. Hva har gården å tilby i forhold til praksisplass for elever som er matrikulert i agronomutdanningsprogram? Hva er gårdens "spesialitet eller genius"?

Inn på tunet. Praksisplass for elever interessert i å lære og få noe erfaringer med IPT. TE: Viktig med praksis innenfor landbruk i tillegg til IPT. Agronomisk ferdigheter.

5. Kan praksisverten ha 2 eller flere praktikanter om gangen?

LG: har hatt erfaring. Lurt med to elever, blir mindre trøkk på bonden.

TE: bedre med to.

AG: flere enn to er for mange.

6. Hvilke forkunnskaper burde eleven ha før de begynne med praksis på din gård?

LG: Forkunnskaper: de vet ikke hva som skjer her. Tar dem med utgangspunkt de har (LG; AG).. Viktig å vite litt om bakgrunn, og interesse.

7. Hvilke forventninger har du som pv til elever som skal ha praksis på din gård?

LG: Må vise interesse er det viktigste. Lurt å ha litt kjennskap til elevforutsetninger.

TE: viktig med dialog før oppmøte.

LG: skolen må informere eleven slik at de har riktige forventninger.

AG: viser dem brødsuffen.

8. Kan du finne tid til å møte med praksiseleven for å diskutere spørsmål om drift og fag på din gård?

SD: viktig at bonden har tid til å snakke med eleven.

9. Hvor viktig er det for deg å få økonomisk kompensasjon for å ha agronomelever fra SJH i praksis i kortere perioder (1-2 uker) på din gård?

Økonomi: LG: Går på kost og losji. Det varierer hvordan det fungerer, men k og l.

AG: en dag er for lite. Mest fjøsstell om vinter, vedlikehold.

10. Hvilke interesse og mulighet har du til å jobbe noe i lag med praksiseleven(e) slik at de får lære noe av deg under praksisperioden?

AG: Interessant å ha folk som kommer, sosialt. Har erfaring med det.

11. Hvilke verdi ser du det er for elever som tar landbruksutdanning å få praksis på utvalgte gårder?

AG: Fortsettelse etter ferdig utdanning. Kunne kombineres med kommune..vikar i botiltak

12. Har du andre idéer som kan være relevant til denne samtalen eller disse spørsmål?

Spørsmål om type gårder som praksisgårder: LG: Profil, ulike gårder og innfallsvinkler. Dialogen mellom praksisvert og skolen, gjensidig behov fra hver side.

Spørsmål om kartlegging av aktuelle praksisgårder: IF: Fint om SJH kan formidle videre.

Plassering av gård: AG: Om IPT er interessant og man skal kjøpe gård er det vesentlig med plassering.

Spørsmål og samtaler rundt IPT:

AG: IPT nord trøndelag, Hege Erikson, har nettverk der man kan henvende seg. Samme i Akershus. Inne på Matmerk, liste IPT tilbyddere.

LG: IPT-nettverk kan være en god rekrutteringskilde for elever.

CB: botiltak på SG kan være bra praksisområde.

AG: Stor utfordringer med IPT er mange kortvarig avtaler. Botiltak er viktig mtp langsiktighet.

Tusen takk for at du tar tid til å hjelpe med denne utviklingen!

## Appendix 7: Journals from both visits to Straumøy Gard

### First trip to Straumøy

#### Logg 12-14.11.2013

Kjørte fra Aurland ca kl 12:30 og ankom Straumøy ca kl 18:00.

Ble møtt av Viljar, Anne og Leif Grutle og viste rundt i fjøset. Så gikk vi inn og ordnet til middag, den var god og det var festlig stemning siden Nat hadde en liten gebursdag å feire. Anne og Leif var med og etter middag satt vi rundt bordet og pratet lenge om Inn På Tunet generelt og om hvordan vi skulle legge opp til neste dags praksis med barn og SJH elevene.

TE og IF fikk formiddagsoppgaver til å være med brukere og én fra Grutle familien i fjøset. Om ettermiddagen hadde de planlagt på forhånd til å lage gresskarsuppe og steke nanbrød på bålpanne. De hadde noen barn med seg og Anne fulgte med og hjalp til med detaljer som var vanskeilig for TE og IF å vite om. Det var også betryggende for SJH- elevene å ha kontakt med erfaren folk.

Etter dagens arbeidsøkt fikk elevene tid til å være alene og skrive logg. Til hjelp med loggen fikk de en rekke veiledende spørsmål som ville stimulere til videre tenkning og refleksjon. Avtalen var at vi skulle gå gjennom loggene ut på kvelden, etter vi hadde spist middag.

Kveldsøkta med samtaler varte lenge og vi snakket om mye tangentielt til dagens opplegg.

### Second trip to Straumøy Gard

#### Logg 14.-16.01.2013 Straumøy

14.01.

Reiste fra SJH kl 13:00 og kjørte til Straumøy. Ankom ca kl 18:00, traff Silje og Viljar og gikk rett i fjøsen som er full av killinger, vf sau, llama, purker, høner og storfe + ungdyr. Dette var en fin oppvarming til morgendagen.

Kveldsmat sammen med Anne og Leif. Samtaler rundt pedagogikk, spesped og nytten av praktiske arbeidsoppgaver i ulike former for undervisning. I vanlig skolesystem er det mange lærere som ikke klarer å se nytten av arbeidsoppgaver ute som arena for undervisning.

IF og TE skal ta ordet imorgen ved oppstart av dagen og delegere oppgavene til brukerne. Hver av de skal ha noen elever med seg om formiddagen og om ettermiddagen skal de ha ulike oppgaver...TE med Viljar og hyttebygging og IF skal steke pannekaker. De vil ta større grad ansvar denne gangen enn første gang. Vi snakket gjennom organisering av opplegget sammen med Leif og Anne. Anne blir borte imorgen men både Leif og Viljar er her og har mulighet til å steppe inn med hjelp til IF og TE.

15.01.

Frokost kl 7:30. Henrik kom ca kl 8:30 og de andre kom litt over kl 9:00.

Barna samlet seg opp i arbeidsrommet på låven og Leif innledet ved å introdusere oss og si at IF skulle delegere oppgavene for morgenøktet.

IF dlegerte oppgaver og Leif supplerte med detaljer som IF hadde ikke nok kunnskap om.

IF lagde kakao med Silje og Alf Magne, TE heiv ned silo til fjøset

Etter fjøsstell var ferdig møtt vi i arbeidsrommet og spiste niste, drakk kakao og TE delegerte arbeidsoppgaver for økt 2.

Økt 2 bestod av 3 hovedoppgaver: jobbing med lavvo, bordkleing av trehytta (TE) og laga pannekaker(IF). Vi jobba med hver vår oppgave fram til litt over 13:30 og samlet ved bålpanna til pannekaker og varm drikke. TE var sammen med Nat, Silje D., Viljar, Lucky, Nikolai, og Henrik. TE engasjert seg med de tre guttene, noen ganger bare to, opp i trehytta med spikring av kledning. Lucky var en god del av tiden nede hos Silja og ordnet med bålet som ble tent for å brenne opp skogsavfall. Leif jobba aleina med Jan Fredrik.

Imens vi ventet på drosjene å hente barne holdte IF og TE vurderingssamtaler med hvert barn. Barna ble hentet etterhvert og ca kl 14:30 var alle reist. Deretter gikk vi en tur, noen hver for oss, andre i lag, og var ute fram til ca kl 16:00. Da vi kom hjem delte vi ut loggoppgaven og alle fikk litt tid til å slappe av og jobbe med loggen fram til fjøsstell som begynte ca 17:30. Cecilie satt på

pinnekjøttet til middag. Vi hjalp til alle man i fjøset og så gjorde klar til en god middag med Leif og Anne invitert.

Middagen varte til ca kl 22:00. Vi koste oss lenge rundt middagsbordet... pratet mye om mangt. Ca kl 22:00 tok vi fram loggoppgavene våre og tok en fellesøkt ved å reflektere over dagens erfaringer og refleksjoner.

Kveldsøkt etter middag

Følte oss hjemme med engang.

Leif: Gøy å sjå hvordan dere var på plass og barna var glade

CB: Mange gode møter idag.

AG: Viktig med ro og være på en plass istedenfor å flytte på ulike oppgaver.

LG: Denne gang var sjh elever på en gruppe hele tiden og sist gang flyttet de rundt. Denne gangen mer fokus.

CB: Igår kveld. SJHelevr mer klar til å ta ansvar, fikk gutsen. "Vi vil prøve"

TE: følte ikke press på å ta ansvar.

IF:

AG: Trø over grenser kommer man seg videre.

TE: Se hvordan det går og om vi føler oss trygge fortsetter vi.

CB:

LG: Bevisst med vurdering, for at de skulle "få den gode samtalen"

CB: Georg og roen. Å gi han rom var viktig.

TE: Følte seg tryggere og mer nysgjerrig denne gangen, mer åpen.

LF: merket det godt idag, kjekt.

TE: om man skal holde på med noe er det viktig med erfaring.

AG: å begynne med det små og bygge erfaring trinn for trinn.

IF: Hjelper med å ta det som det kommer. Å gjøre ut fra det man ser man kan gjøre

AG: om det er vanskelig samtaler kan man kjøre på tur. Det samme når man er i arbeid, man er opptatt med ting.

AG: ved å ta små skritt utfordring er å få økonomi ut av det.

CB: hvordan får man næring i det.

LG: Viktig å tenke på flerbruk når man investerer.

CB: Var elevene klar over at vi skulle komme idag?

AG: Det varierer hvor godt elevene og skole er forberedte.

LG og AG: Om Henrik som briljerer i det praktiske og sliter på skolen.

TE: Merket hvor viktig å ha troen på de, mtp å treffe spikern, selv om det er små ting.

AG: Viktig å være med inn i arbeidet.

CB: tror at de fungerer best i små grupper.

AG alle sliter på et eller annet vis, små grupper viktig.

CB: mestring og å holde på med noe som er viktig for meg.

IF: Om J. Magne.

LG: Kommunikasjon er enklere når man gjøre noe sammen. Man lære fort om trivsel og ting er på plass

TE: det er en god opplevelse å gi andre en god opplevelse.

CB: viktig med trening av utholdenhet.

AG: må være oppmerksom på andres behov og ta hensyn til andre.

NM: Hva kunne dere tenke dere er neste utviklingstrinn for dere?

TE: neste gang være mer med på planlegging og gjennomføre det. De kjenner plassen.

IF: Engasjere flere barn neste gang. Jobbet begge gangene med bare ett barn. Å få to till å jobbe sammen på en ting.

AG: våren noe med hage, planlegge noe der.

LG: Hva er mest lærerikt for dere, koplet opp til skolen,

VG: høst vinter vår

AG: prøve ut muntlig, kompetansemål i en praktisk setting. Arbeidsoppgave mot noe som kan brukes i matematikk, arbeid og snakke kunnskap i de. Tenke konkrete situasjoner opp mot læreplanmål. Løsning til problemer kommer underveis. Veien blir til mens vi går.

## Appendix 8: Semester project in “Inn på tunet (Green Care)” for SJH students

This is the semester report for the students participating in the case study were to write. The assignment was designed and administered by the teacher Cecilie Bugge.

### Semesteroppgåve i « Inn på tunet» for Vg3 2012 – 2013

med litteraturliste/kjelder

**Du er tilbyder og vil ha ein brukar eller ei gruppe brukarar inn på tunet ditt.**

Semesteroppgåva skal ha ei **forside** med tittel på oppgåva og kven som er forfattar. Etter framsida kjem ei side med **innhaldsliste**. Det skal vera sett inn **sidetal** i oppgåva.

Linjeavstand 1,5, Times Roman 12 pkt.

Les noko av litteraturen frå

lista og lag ein disposisjon til innleiinga!

#### 1. Innleiing:

Innleiing kan betraktast som ein kort introduksjon til opplegget ditt - som ein tekst som kunne blitt brukt i ei brosjyre.

Desse punkta skal vera med:

- **Kva** dette samarbeidet dreiar seg om
- **Kven** som gjer dette og kven som skriv oppgåva (presentasjon)
- **Kva for** ressursar på garden /skulen/barnehagen/helsetunet.. er viktige for samarbeidet
- **Kvifor** vel du dette prosjektet? Skriv ei kort grunngjeving som peikar fram mot neste kapittel om visjonar og mål.

Innleiing skal også innehalde ei kort oversikt over oppgåva sitt vidare innhald.

Omfang 1-1,5 sider. Eventuelt bilete kjem i tillegg.

#### 2. Utvikling av visjonar og mål:

Gjer greie for kvifor du synest «Inn på tunet» er viktig og nødvendig for elevar, skule, andre brukarar, lokalsamfunn og landbruk med bakgrunn i trendar og utviklingstrekk i samfunnet i dag.

Bruk gjerne relevante kjelder frå litteraturen. Det er i denne delen av oppgåva det er lettast å vise at du har lese.

Desse punkta skal vere med:

- Ein eller fleire langsiktige visjonar for samarbeid mellom gard - skule/andre brukarar. Visjonar kan gjerne ha høgde og spenst, det du drøymmer om!! (store og konkrete).
- Ein eller fleire konkrete mål for samarbeidet som du har ønskje om å oppnå over tid.
- Dei ressursar som du rår over for å kunne innfri dei langsiktige måla mellom samarbeidspartnar og garden.

Omfang: 1-2 sider

#### 3. Prøveprosjekt:

Denne delen av semesteroppgåva skal handle om prøveprosjektet som du skal utføra med elevar/ evt. andre i løpet av våren.

A: PRESENTASJON AV PRØVEPROSJEKTET

Kort og greitt fortalt KVA dette prøveprosjektet skal handle om, KVIFOR du har valt akkurat dette og KVEN som er målgruppa.

B: PLANEN, følgjande må vera med i planen:

- **Mål** for kva gruppa skal lære under prøveprosjektet: Kunnskaps-, ferdighets- og haldningsmål. Eventuelt mål for bonden og samarbeidspartnar.
- **Rammefaktor** : Moglegheiter, begrensninga og forutsetningar som er sentrale for å kunne gjennomføre prøveprosjektet.
- **Gruppa sine læreforutsetning**: Alder, målgruppe, motivasjon, kulturell bakgrunn.
- **Innhald**: Kva skal undervisning handle om; kva skal faktisk gjerast, erfarast, lærast.
- **Arbeidsprosessen**: Korleis leggjast arbeidet til rette på garden?
- **Vurdering**: Kva skal vurderast/evaluerast i prosjektet, når og kven skal vurdere.

C: GJENNOMFØRING

Beskriv kva som skjedde ved gjennomføring av prøveprosjektet. Ta med logg, bilete, teikning og andre produkt.

D: EVALUERING (vurdering)

I denne delen drøftar du gjennomføringa i forhold til måla i planen. Gjekk det som du planla? Måtte du endre noko undervegs? Fungerte opplegget bra eller dårleg? Kva skjer med gruppa når undervisninga tek utgangspunkt i praktiske oppgåver? (Minst to visningar frå litteraturen bør

leggjast inn som kjelder)

Omfang frå 5 til 10 sider med bilete og bilettekst

#### 4. Refleksjon:

I tillegg er det ønskjeleg at du kjem med eigne refleksjonar over prøveprosjektet. Gjev denne erfaringsny innsikt i forhold til mål og visjonar for vidare arbeid? Bruk eigne ord.

#### 5. LITTERATURLISTE: (Kjelder)

Litteraturlista skal gje oversikt over litteraturen som er brukt i heile oppgåva. Når de brukar ei kjelde skal den også refererast inn i oppgåva

## Appendix 9: Letter to potential apprentice/practicefarms

Nathaniel P. Mead  
Vinjavegen 10 • 5745 Aurland, Norge  
Telefon: +47 47764766 • E-post: n-mea@online.no

Dato: 08.12.2013

Kjære [Recipient]:

Som masterstudent ved Universitetet for miljø- og biovitenskap (UMB) i Seksjon for læring og lærerutdanning (SLL) jobber jeg nå med utvikling av naturbruksutdanning i Norge.

Problemstillingen som jeg jobber med er følgende: *Hvordan kan jeg som lærer, i samarbeid med studenten og deres individuelle mål og ferdigheter, skape og gjennomføre meningsfulle læringssituasjoner som bidrar til deres mestring av essensielle praktiske ferdigheter og teoretiske kunnskaper, i fremtidens økologisk jord- og hagebruk.*

Samtidig som jeg studerer jobber jeg med denne problemstillingen i praksis som lærer i jord- og plantefag ved Sogn Jord- og Hagebruksskule (SJH) i Aurland. Skolen har som mål å bruke skolegården som det viktigste klasserommet, og dermed integrere teoretisk og praktisk undervisning i stor grad. Teori og praksis går hånd i hånd gjennom sesongene, og "læring gjennom handling og refleksjon" er sentrale virkemiddel i læreplanene i alle fag. I tillegg til de vanlige produksjonsfag, tar elevene valgfrie fag der de får anledning til å spesialisere seg i en eller annen form for virksomhet som kan være en tilleggsnæring. Her kan de velge mellom gårdsturisme, foredlingsvirksomhet, samarbeid med grunnskole eller flere andre naturbaserte næringsvirksomheter, som fordypningsområder. Det er en fordel at elevene, mens de studerer, kan få praksis i den tilleggsnæringen som de velger å fordype seg i. Derfor tar jeg kontakt med deg.

Din virksomhet er valgt ut fordi den er én av flere som elevene har vist interesse for. Elevene våre ber om muligheten til å komme seg ut og få "smake på" sidevirksomhetsnæringen de er interesserte i. Ved at landbruksutdanningen i Norge ikke har innlagt lærlingordning som del av pensumet, er det muligheter for bare kortere praksisperioder mens elevene er i skolen. Om bedriften er lokal kan det være regelmessige enkelte dager. I tillegg prøver vi å få til lengre sammenhengende perioder der eleven kan få mer langvarig praksis. Etter fullført utdanning kan det da være aktuelt at de ordner seg med en mer langvarig praksisavtale på egenhånd.

Jeg i min masteroppgave, og vi på SJH, er interesserte i å kartlegge hvilke interesse og mulighet du og din virksomhet har i å være en del av dette tilbudet. Vedlagt er et spørsmålskjema som vil være til stor hjelp for meg, og for SJH, i videreutvikling av muligheten til å gi elevene gode, meningsfulle læringssituasjoner.

På forhånd vil jeg takke for at du bruker din tid på dette i en ellers travel hverdag.

Vennlig hilsen

Nathaniel P. Mead

## Appendix 10: Work plan organized by the farm hosts, Anne and Leif Grutle, for SJH students at Straumøy Gard

| ARBEIDSPLAN STR AUMØY GARD   |            |   |  |
|--|------------|---|--|
| VEKE 46 November 2012  |            |   |  |
| Tysdag<br>13.11.12<br><br><i>Besøk av Viljar, Nat Mead og to elever frå Sogn jord- og hagebruksskule</i> |            | Fjøsstell:  | Etter fjøsstell:   |
|  | NH         | Laga kakao og pakka koppar. Måla nedbør og temperatur. Gi kaninane kraftfor, litt høy, friskt gras og vatn.<br><b>Heidi</b>                           | MAT<br><br>Laga hokaido-suppe.<br><i>S, GJL</i><br><b>Kristin, Grete</b><br><br>Laga brød til suppa.<br><i>JFGV, AMH</i><br><b>Anne, Heidi</b><br><br>Jobba med lavvoen.<br><i>NH, HB</i><br><b>Leif</b><br><br>Støvsuga og kosta i forrommet.<br><i>AB</i><br><b>Oddgeir</b><br><br><b>Dersom det blir pausar i arbeidet kløyver me ved eller ryddar på låvar og i dyrerom.</b> |
|  | GJL<br>AB  | Gi kyrne silo. Kosta golvet, vaska golvet på melkerommet. Ta hestane ut i luftegarden og gi dei høy og vatn der.<br><b>Oddgeir, Kristin</b>           |  |
|  | HB<br>JFGV | Gi sauer, lamaer og geiter inne silo. Gi Emma og grisungane kraftfor. Gi hønsa kraftfor og reint vatn. Plukka egg. Setja egg på brett.<br><b>Leif</b> |  |

| ARBEIDSPLAN STR AUMØY GARD   |  |  |  |
|--|--|--|--|
| VEKE 3 Januar 2013   |  |  |  |
| Tysdag<br>15.01.13<br><br><i>Anne er på kurs i Sveio kommune</i><br><br><i>JFGV kan ha besøk med seg frå skulen.</i><br><br><i>Besøk av Viljar, Nat Mead og to elever frå Sogn jord- og hagebruksskule</i> |  | Fjøsstell:   | Etter fjøsstell:   |
|  | AMH  | Laga kakao og pakka koppar. Måla nedbør og temperatur. Gi kaninane kraftfor, litt høy, friskt gras og vatn.<br><b>Inga</b>                                     | Laga røre og steika pannekaker på bålpanna ved Tunstova.<br>Laga syltetøy og te<br><i>GJL, SH</i><br><b>Inga, Kristin, Grethe</b><br><br>Bordkle hytta i plantefeltet, ei lita samlingsstund oppe i hytta før me jobbar med den.<br>Kjøra så langt som mogleg med traktoren og få på plass bordkledning.<br>Hugs spiker, sager, hammar, øks, tommestokk, førstehjelpsutstyr.<br><i>HB, NH, LN, AB</i><br><b>Tuva, Viljar, Hilde, Oddgeir</b><br><br>Jobbe med lavvoen.<br><i>JFGV, AMH</i><br><b>Leif, Nat</b> |
|  | MAT  |  |  |
|  | SH   | Støvsuga og tørka støv oppe på hemslen. Gi hønsa kraftfor og reint vatn. Plukka egg. Setja egg på brett.<br><b>Grethe</b>                                      |  |
|  | GJL<br>AB  | Gi kyrne silo. Kosta golvet, vaska golvet på melkerommet. Ta hestane ut i luftegarden og gi dei høy og vatn der.<br><b>Oddgeir, Kristin</b>                    |  |
|  | HB<br>LN   | Gi sauer, lamaer og geiter inne silo. Gi Emma og grisungane kraftfor. Gi hønsa kraftfor og reint vatn. Plukka egg. Setja egg på brett.<br><b>Viljar, Hilde</b> |  |
| JFGV<br>NH   | Hiva ned silo til fjøs. Måka luftegarden.<br><b>Leif, Tuva</b> |  |  |



## Appendix 11 Reflections and summaries from SJH Vg2 students' practice period in April 2014

### Oppsummering/refleksjon fra Vg2 praksisperioden i april 2014

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Ragnhild Bj. på Skjerdal

Det har vore ein travel og lærerik periode med lange og varierte arbeidsdagar. Eg har verkeleg fått eit innblikk i korleis det er å drive ein brattlendt vestlandsgard med ulike husdyrassar. Eg har fått tatt del i arbeids- og familielivet til Anne Karin og Harald og eg vart teken godt imot. Eg hadde ikkje avtalt spesifikke mål før eg kom til garden og møtte opp med opent sinn, og tok dagane som dei kom. I forhold til arbeidstid kunne det vore lurt å avtalt dette på førehand slik at eg hadde førebudd meg på å vere der frå 06.00 til 20.00 enkelte dagar..(med pausar). Det var fint å sjå kor mykje arbeid det faktisk er å ha fleire typar husdyr og i det antalet dei hadde, samt korleis dei nytta ressursar på garden med turisme, stølsdrift, utleige av feriehus mm.

Eg vil anbefale plassen til andre elevar dersom ein vil følge og delta i bonden sine arbeidsoppgåver i løpet av ein dag. Det er krevjande og mykje å setje seg inn i men det gav meirsmak. Ein stiftar også nettverk i nærområdet og det kan vere moglegheiter får å jobbe der ved ein seinare anledning som avløysar. Ein gard med hyggelege og arbeidssame menneske!

Ronja Z. på Sagaplant

Jeg har i flere år bodd i nærheten av Sagaplant. Jeg har visst om dem, og jeg har tidligere prøvd å få jobb der, som på andre gartnerier. Det at de driver med salg videre til planteskoler og mindre til privatpersoner (småskala-innkjøp) visste jeg også. Jeg visste likevel lite om hvilken rolle de spilte for planteproduksjonen i Norge.

Tidligere erfaringer og hvordan jeg jobber privat, gjør det litt vanskelig å gjennomføre en så "steril" planteoppavl slik det kreves her. Det er noe som skurrer i hodet mitt. Det er mest av alt uvant kan en vel si. Jeg forstår viktigheten med det, men jeg vet ikke om jeg klarer å jobbe med planter på et laboratorienivå selv. Jeg er dog veldig takknemlig for å ha fått lov til å se og prøve ut nye ting. En bit i puslespillet har på en måte falt litt på plass.☺

Päivi på Malmgård i Finland

Kristina synes at en praksisperiode på en knapp uke er altfor kort. De finske elevene og studentene pleier å ha flere måneders praksisperioder. For meg har de tre dagene jeg fikk være på Malmgård vært veldig lærerike. Siden det var for tidlig å arbeide på åkrene fikk jeg mest innblikk på butikk- og entreprenørskapet. Bryggeridelen ble drevet av helt egen personale og jeg hadde ikke tilgang dit. Jeg regner med at det var på grunn av bestemmelsene rundt alkoholproduksjonen. Om bryggeriet og produktene kan du lese [HER](#).

Vidar G. på Frilund Gård, Bjørkelangen

#### **Oppsummering**

Vi hadde veldig flaks med været den uka jeg hadde praksis, som gjorde at våronna kunne begynne for fullt. Var veldig morsomt, og ikke minst lærerikt, å være med på. Masse arbeid, og mye traktorkjøring, men det ble tid til andre arbeidsoppgaver innimellom. Det er godt å kjenne at jeg virkelig har gjort en innsats, og jeg gleder meg til å komme til gården i sommer å se hvordan det vokser på jordene. Skulle ønske jeg kunne vært med på blanding av såkorn og såing også, men det får bli en annen gang. Føler uansett at jeg har lært veldig mye, både om hvor lang tid arbeidsoppgaver kan ta, vedlikehold og kjøring av traktor, treomplanting, kompostpreparater og mye annet. Ingunn var flink til å forklare både hvordan og hvorfor jeg skulle gjøre ulike arbeidsoppgaver. Alt i alt en veldig fin uke!

#### **Kan jeg anbefale praksisplassen til andre?**

Absolutt! Det hadde sikkert en del å si at jeg er født og oppvokst der jeg hadde praksis. Jeg trengte ikke noen opplæring i å kjøre traktor, og kunne jobbe ganske selvstendig. Men gården er så allsidig at det alltid finnes masse forskjellig å gjøre, og Ingunn er (som regel) veldig flink til å forklare ulike arbeidsoppgaver. De som vil ha praksis på Frilund må nok være glad i å jobbe mye, men til gjengjeld får man masse kunnskap og praksis inn i kroppen. Anbefales på det varmeste!

**Andreas L.** Praktikvert: Arne Bisgaard økologisk planteavl og malkestorfe

**Egne refleksjoner.** Det er vanskelig at kun have en uke fordi man kommer med på kort lånt tid. Det vanskelig for landbruket at tage sig den rette tid til at give en plads til at komme ordenligt ind. Jeg har havde en fordel fordi jeg kan jobbe selvstændigt og har erfaring fra andre landbrug i Danmark. Men en kort refleksjon vil være at tage et praksis år efter agronom utdanningen. Det vil være bra for utviklingen av kompetenser og sikkerheten i yrkets ulike kundskaper.

Bra sted og fint at anbefale.

Renate H. på Gudleiksgarden i Samnanger.

Oppsummering/refleksjon av heile praksisperioden:

Har hatt ei fin veke. Kosa meg veldig med å få vere på ein liten gard på vestlandet (der eg sjølv er vokse opp). Bente er ei driftig og driven dame som får ting til å gå rundt. Ho har mange idear og er ikkje redd for å setja dei ut i livet. Det er veldig inspirerende å vera saman med menneskjer med så mykje pågangsmot og entusiasme! Dette kan gå bra, du får det til om du vil! Bente bryr seg ikkje om kva andre meiner, ho er ikkje redd for å skilje seg ut eller prøve ut ein ide eller produkt! «det kan jo hende det går bra» seier ho. Takknemleg for at eg fekk lov til å vere med å fot følge ho i fire dagar! Ho står ikkje på lista til SJH over praksisverter, eg tok kontakt med ho privat for eg var interessert i akkurat hennar livsstil og måte å drive gard på, men skulle absolutt anbefale andre garden/staden om ho kunne tenkje seg å ta imot andre elvevar.

Aske T. på Olavsbråten i Noresund

Jeg er super glad for praksisperioden. Den var lærerig på riktig mange niveauer. For det første var det utrolig fint at se en gard i opstartsfasen og mærke hvordan rutiner skal oppbygges og ikke blot er en selvfølge. Det at se unge mennesker som er så arbeidsomme og engagerede som Veslemøy og de andre var i sig selv inspirerende. Praktisk lærte jeg en masse om at harve og at bruke og ikke minst at bli komfortabel med bruk af traktor. Desuden fik jeg lært meget om hvordan prioriteringen i arbejdsdagen foregår og hvordan Veslemøy og Bjørn havde skaffet penge til for eksempel at bygge ysteriet. Udover strengt faglig læring var der også en rigtig god social resonans og opholdet var på mange måder mindeværdigt. Jeg vil klar anbefale stedet som praktiksted for kommende elever. Der er både mulighed for at få afvide præcis hvad man skal foretage sig hvis det passer bedst eller at man selv formulerer sin arbejdsdag og søger sit niveau.

Sofia E. på Fokhol Gård på Stange

Generelt har jeg haft en utrolig spænde og lærerig praksisuge på Folkhol. Det har været hårdt, men Jeg tror også at det har givet et realistisk billede af hvordan det er at arbejde på en gård. Jeg var heldig at det var sol hele ugen, hvilket gav mulighed for mange forskellige opgaver. Jeg har dog intet ønske om selv at drive en så stor gård, og jeg syntes, at selv om den bliver drevet biodynamisk, som jo nok er noget af det bedste vi kan tilbyde vores jord i større skala, så er det jo stadig store områder med monokultur, pløjning, jordpakning mv. Jeg har personligt den holdning, at når vi efterhånden ved så meget om vores jord og konsekvenserne af den måde vi behandler den på, er det på tide, måske selv for biodynamikerne, at tænke lidt nyt.

Jeg er delvist blevet inspireret til at lære mere om biodynamisk landbrug og det er vel bedst at gøre dette gennem Steiners Landbrukskursus. Derudover er jeg blevet inspireret til at lære flere arbejds-hesteracer at kende, og finde ud af flere måder at samarbejde med hesten på.

Jeg vil bestemt anbefale gårdensom praksisplads til kommende studerende hvis de får mulighed, men forståeligt nok er forpagterlaget mest interesseret i praktikanter der kommer for længere perioder, og som det derved "kan betale sig" at oplære.

Som sagt giver gården et realistisk billede af det arbejde man har i vente hvis man ønsker at drive gård, menneskerne er søde og imødekommende, og der er et dejligt ungdomsmiljø med en

masse andre unge praktikanter. Der er en vidunderlig natur, og hvis man til og med er interessert i hestearbejde i praksis er Fokhol gård det perfekte praktiksted.

Jon Ivar T. på Avdem Gard

Eg hadde eit flott og innhaldsrikt opphald på Avdem. Det som var mest interessant var å få djupare innsikt i korleis dei framstillar ost. Særelg spennande var det med alle dei forskjellige typane dei laga, og korleis ein går fram for å produsera kvar einskild. Eg kunne godt ha tenkt meg å vore der legere, for å ta del i produksjonen av alle typane. Det er også alltid lærerikt å sjå kva for løysingar andre har i fjøsa sine. Avdem fortalte at han aldri har dei største oksane sine nermast døra, sjølv om ein ville tru at dette var det mest praktiske er det best å ha dei i bunge nr. 2 frå døra. Dette er fordi dei går heller ut om dei får litt meire fart, eller distanse å gå på, istanden for å gå rett ut på slaktebilen, eller ut på ei rampe.

Eg hadde eit flott opphald med god mat og god bevertning. Eg vil på det sterkaste anbefale alle som har moglegheit til det å reise til Avdem. Om ikkje på praksis, så i allefall på besøk i gardsbutikken, der det er eit stort vindauge inn i produksjonslokalet. Tvers igjennom igjennomført!

Hanne Marte på Alverstien:  
Oppsummering:

Grunnen til at eg valde å reise til Alvastien i praksis var at eg hadde lyst til å få eit innblikk i deira livsstil og å lære meir om permakultur, skogshage, urter og ville vekstar. Eg hadde lite kunnskapar om dette frå før og føler derfor eg har lært ein god del, men eg har framleis mykje å lære. Det er vel nettopp inspirasjon til å lære meir eg har fått mest av. Eg vil lære meir om permakultur generelt, og om korleis ein kan designe ein bærekraftig og nyttig hage som ein kan forvalte med minimale resurssar.

Sjølv om dei konkrete arbeidsoppgåvene mine, som å plukke Skvallerkål, lempe tømmerstokkar og stein ikkje var av dei mest lærerike synes eg det var heilt greit. Dei delte så mykje av sine tankar og kunnskapar at eg var glad for å kunne gjere noko nevenyttig tilbake. Det er vel først og fremst teoretisk eg har lært i denne praksisen. Eg hadde trudd at dei også hadde grønsaker og at dei kanskje var meir sjølvforsynt enn dei var. Derfor har eg lyst til å lære meir om korleis ein kan drive med grønnsaksdyrking innanfor permakultur, og også dyrehald.

Praksisveka mi vart nok ein del prega av at dei skulle arrangere kurs til helga, og dei hadde mykje å førebu til det. Dermed fekk eg innblikk i korleis det kan vere, og eg fekk hjelpe til med det. Samtidig trur eg at dei ville hatt meir tid til å forklare meg meir dersom dei ikkje hadde det å tenke på.

Eg kan absolutt anbefale staden for andre dersom dei er interessert i permakultur og skuoghage. Arbeidsoppgåvene var kanskje ikkje av dei mest lærerike men det er absolutt menneska og dei tankane og planane dei gledeleg deler.

Une på Lygre

**Oppsummering:**

Det som eg tykkjer har vore mest interessant med å vere på praksis på Lygre, er det å bli litt kjend med måten dei driv garden på og sida garden er økologisk driven var det interresant å sjå korleis gardsdrifta vart praktisert i forhold til det eg har sett før. Dei praktiske oppgåvene eg har vore innom viser nok ein del av korleis garden er driven på denne tida av året. Våronna i kjøkkenhagen var i full gong, så me renska ugras, starta nokre plantar, hausta litt av både ville vekstar og hagevekstar som hadde byrja å komme. Slik sett var ikkje våronna i kjøkkenhagen her så forskjellig i frå våronna heime eller i Aurland, men det vil jo alltid vere litt forskjellige måtar å ordne ting på. For eksempel nytta dei mykje armeringsgjern i nettingform som støtte til erter og agurkar.

Når det gjeld geitene var det mest mjølking eg var med på. Mjølkinga i seg sjølv var ikkje så nytt for meg i og med at det stort sett bestod i å setje mjølkeorgan på ein geit og flytte det til neste når juret var tomt. For å kunne relatere til dette må eg nesten samanlikne med noko, ikkje for å

seie at noko er betre enn det andre i og med at for eksempel måten ein mjølkar på her ( på span) antakeligvis er bestemt av mange årsakar. Kanskje det er betre å ta all mjølka ned til tanken som ligg ved ysteriet i kjellaren på våningshuset, fordi det var meir praktisk enn å mjølke rett på tank der ein uansett måtte flytte mjølka ein gong til når ein skulle bruke ho, og det kan vere økonomiske årsakar. Eg ser no at eg skulle ha tenkt meg om og spurt meir kvifor ting er gjort som dei er. Uansett har det vore kjekt å sjå korleis ting vert gjort heilt praktisk, kanskje den måten dei utførar arbeidet på fungerer best for dei eller er mest lystbetont i kvardagen. Det har i alle fall vore interessant å vere med å sjå litt korleis dei arbeidar. Mykje av det dei driv med her er i prinsippet ikkje nytt for meg, men måten dei vel å gjere det på gjer at eg likevel har lært å sjå arbeidet i frå litt andre synsvinklar. Døme på dette er å ta vatnprøve av frø som gjer at ei kan sortere ut dei frøa som mest sannsynleg er gode, måten å stø erter og agurkar på, eller foredling av mjølk til brunost.

Det eg kunne tenke meg å lære meir om er sjølvsagt koking av brunost, som eg ikkje følar at eg har noko som helst god oversikt over. Eg kunne også tenke meg å lære litt meir om ville vekstar og korleis å bruke dei, det var noko Veronica og woofaren Shon praktiserar ganske aktivt. Frøtaking har eg tenkt på før, men eg blei inspirert igjen då Veronica hadde teke ein del frø.

### **Noko eg har gløymd å skrive om før no etter praksisperioden er over, er min eigen innsats.**

Det eg tenkte før eg reiste, var at eg skulle forsøke å vere til hjelp for dei eg skulle vere hjå i praksisen. Det at eg så vidt er kjend med mjølking, gjer at eg kunne vere med å mjølke i frå start av. Dei andre oppgåvene utom ysting var eg for det meste kjend med frå før, så eg prøvde å arbeide så godt eg kunne, eg fekk litt rettleiing på mjølkinga då eg hadde ein tendens til å la mjølkeorgana sitte litt for lenge, eg trur eg klarte å betra meg. Ystinga var eg for det meste med må meir som tilskodande elev då mykje av arbeidet var ein einmannsjobb som eg i utgangspunktet ikkje hadde peiling på. For det meste jobba eg saman med eller rett i nærleiken av Veronica, Dag eller dei andre praktikantane som hadde kome inn i rutineane, slik kunne eg spørje om noko viss eg var i tvil.

Vis nokon er interessert i allsidig hagebruk i småskala og geitedrift, vil eg verkeleg anbefale å ta praksisperioden hos Dag og Veronica på Lygre. Veronica og Dag er begge varme sympatiske, positive og engasjerte menneske som viser at dei bryr seg, og som brenn for det dei driv med, berekraftig matproduksjon. Dei har mykje kunnskap som dei er flinke til å dele både praktisk og teoretisk. Eg følte meg verkeleg velkomen og vel ved å vere i praksis hjå dei!

Etter ei praksisveke på Lygre, blei eg inspirera av Dag og Veronica sitt engasjement, og bevisstheit kring matproduksjon. Så eg har bestemt meg for at eg lesa boka, Sannheten på bordet og generelt opparbeide meg litt meir kunnskap om kva som faktisk skjer i matproduksjon.

## Appendix 12 Letter to potential practice hosts for SJH students

### Praksisvert for elevar ved Sogn jord og hagebruksskule

Sogn jord- og Hagebruksskule er landsline i økologisk landbruk, og utdanner agronomar med kompetanse innanfor økologisk jordbruk og hagebruk. Skulen ynskjer og at elevane skal få komme seg ut i praksis på ei landbruksretta bedrift/gard og sjå andre ting enn kva me kan tilby dei på skulen. I samband med dette ynskjer me å få svar på om gardsbruket/foretaket ditt er interessert i å vere ein praksisplass som elevane kan ta kontakt med for utplassering. Nedanfor står litt meir info om opplegget:

Målet er at elevane skal få praksis på eit aktivt gardsbruk eller ei landbruksretta verksemd. Skulen ønskjer helst at elevane ikkje skal ha praksis på "heimgarden", men ut og sjå noko "nytt" og andre måtar å gjere ting på. Målet med praksisen er at elevane skal velje seg ein gard/landbruksretta plass som ligg opp mot deira interesse og følgje arbeidsdagen her gjennom ei veke.

Elevane skal jobbe for kost og losji. Dei skal ikkje ha løn for arbeidet dei utfører, men praksisverten må halde dei mat og overnatting. Det er heller ikkje noko økonomisk støtte frå SJH til praksisverten. Før utplasseringsperioden må eleven sjølv ha muntleg kontakt med den aktuelle praksisplassen og gjere avtale om opphaldsvilkår, kva arbeid som er planlagd i den aktuelle perioden og kva praksisverten forventar av eleven.

Dersom du/de er interessert i å vere ein praksisplass som elevar frå SJH kan kontakte, ynskjer me at de sender ein kort e-post med stadfesting av dette, samt kort info om kva du/de driv på foretaket, og kva evt. elevane kan få praksis i.

E-post adresser til kontaktpersonar på skulen:

[Olav.Hoyheim.Einan@sfj.no](mailto:Olav.Hoyheim.Einan@sfj.no)

[Monica.Gjesdal.Larsen@sfj.no](mailto:Monica.Gjesdal.Larsen@sfj.no)

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