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# Rural camp school eco learn – Outdoor education in rural settings

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Outdoor education in rural and agricultural surroundings offers many possibilities for learning and studying different school subjects as well as teaching. This study aims to explore the development of an educational rural camp school, Eco Learn, and to investigate pupils' expectations and experiences and teachers' experiences of carrying out the developed programmes. The development of programmes was a participatory process that included representatives from all parties that were involved (e.g. teachers, farmers, pupils). A mixed methods approach was used; quantitative (questionnaire) and qualitative (interviews, observation, open questions) methods that support each other. Analysis was done by inductive content analysis. A general increase in positive attitudes towards learning and studying in rural settings amongst the pupils after participation was found. The urban pupils expected more romantic countryside values and the rural pupils learning processes and products. Outdoor education in rural settings combined with preparatory activities was found as a positive experience for pupils' learning by both the pupils (about 80%) and the teachers (about 70%), and it was evaluated as a better learning environment than an ordinary classroom. In general, results reveal many positive educational values of outdoor education in rural settings and a linkage between affective and cognitive values. Finnish teacher training is urged to take this type of education more effectively into the curriculum for teacher studies.

**Keywords:** countryside, environmental education, education for sustainable, development, experiential education, farm visit, mixed methods approach

## Introduction

Some reports on outdoor education in rural settings have been published (e.g. Krogh, Olsen, & Haukeland, 2005), but studies especially on pupils' expectations and experience are diverse and teachers' experiences not well researched (Dillon et al., 2003). To be able to investigate the phenomenon more closely a research and development project, Eco Learn was established. The theme of the project was chosen to be the route of food as people are living to a greater extent in cities and a diminishing number of pupils' have personal experiences of nature or life in the countryside. Active farms are heavily decreasing (Niemi & Ahlstedt, 2006). Consequently, natural contact to the origin of our food is scarce even in the countryside. Pupils' knowledge on agriculture has been found to be low (Mabie & Baker, 1994; Trexler, 2000), but also differences in the knowledge between urban and rural students can be seen (Frick, Birkenholz, Gardner, &

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Machtmes, 1995). Youth and children are, in other words, getting more distant to the environment, food chain, and their image of human-nature interaction is more often based on television documentaries and other media images (Palmer, 1998). Out of school experiences in developing agricultural understanding are therefore important (Trexler, 2000). Teaching and learning initiatives that are developed need to recognize the complexity and variability of young people's view and understanding about food and farming (Dillon et al., 2003). For becoming a conscious and an environmentally aware consumer one needs to understand the true matter of things.

These issues were addressed in Eco Learn, a rural camp school project. Eco Learn as a concept is viewed as Outdoor Education by Knapp (1996) and based on the constructivistic learning theory by Davis et al. (1993), Environmental Education theory by Palmer and Neal (1994) and by Palmer (1998) and experiential learning theory by Kolb (1981, 1984). Eco Learn is built up by two parts, a development part and a research part. In the development part, our main challenge was was to adapt the mentioned theories with the aims and content of National Core Curriculum (NCC) for Basic Education (2004) to farm surroundings. Comprehensive educational programmes (Orion, 1993; Dillon et al., 2003; Schmitz & Wiese, 2006; Dillon et al., 2006) on countryside and food production were tailored by researchers, experts, teachers, and farmers. The aim of the programmes was to clarify in a concrete way for pupils the route of food, the understanding and respect of nature by demonstrating a sustainable relation between man and nature in agriculture, and to offer a personal, positive, genuine and realistic image of the countryside. The successful programmes from the development component formed the base for the educational farm visits and were studied in the research component. In the research component, our aim was to investigate the pupils' experience on learning in a farm environment and if there are any differences between rural and urban pupils. This was to be done by observation during camp schools, interviews and pre- and post-questionnaires that contains closed and open-ended questions. Teacher's experiences were studied with a questionnaire. The following research questions guided this study:

1. What kinds of expectations do urban and rural pupils have on studying and learning in outdoor rural settings?
2. What kinds of experiences do urban and rural pupils have on studying and learning in outdoor rural settings?
3. What kinds of experiences do teachers have on outdoor education in rural settings?

Outdoor education has a long tradition in Finland (Kuronen, 1997). It has been found to be an effective way of learning (Palmberg & Kuru, 1998; Bogner, 1998). Teaching and learning that takes place outside the classroom, especially outside the school building, has other values and qualities than the more traditional form of education inside the classroom (Dahlgren & Szczepanski, 1997). The term "outdoor education" in this study represents teaching and learning that takes place outside the classroom with the aim to achieve goals in National Core Curriculum for Basic Education (2004). "Outdoors" includes all areas outside the ordinary teaching and learning surroundings (Knapp, 1996). In this study, it means all environments outside the school, even inside, such as a farm house.

Outdoor education includes both environmental education and education for sustainable development, as they are a part of NCC. McRae (1990) has further divided outdoor education into knowledge focused outdoor teaching and learning, ecologically focused outdoor environmental education and outdoor leisure education that is focused on personal growth. In this study, outdoor education includes all these aspects, as these aspects are all part of an ordinary school day and National Core Curriculum for Basic Education (2004).

An advantage with outdoor education is its comprehensiveness and deductive logic. This means that the object or process to be taught can first be seen as a whole and then broken down and studied in detail. Pupils can construct their own image where knowledge is attached to certain parts of their earlier knowledge without loosing the context (Dahlgren & Szczepanski, 1997). However, many teachers like to teach using the traditional methods that are based on inductive reasoning, from detail to general conclusion (Kohonen, 2001, 41).

Researchers have found that the learning process in outdoor education is efficient, as several senses are activated in the learning situation (Dahlgren & Szczepanski, 1997), and recognize pupils' different learning modalities (Vermunt, 1996; Kolb, 1999). For example, learning theory on horses at the stables activates senses as eyes, ears, smell, touch and muscle sensors as well as emotions, were ordinary teaching in the classroom concentrates on activating senses as eyes and ears and to a smaller degree muscle sensors. Studies have found that knowledge is attached more permanently to memory structures, when more senses are activated in the learning process and knowledge is also considered to be processed deeper (McRae, 1990; Dahlgren & Szczepanski, 1997). Emotions are also important in the learning process. Nundy (in Dillon et al., 2003) explains this as reinforcement between the affective and the cognitive domain, where one influences the other and provides a bridge to higher learning. The activation of different senses, the affective and cognitive domains can be seen when comparing these two examples on wheat, the first one from elementary school textbook and the second one from Eco Learn diary.

Example from elementary school textbook:

> Wheat needs a long growing season and a good soil. It grows only in Southern Finland. You are able to bake bread, buns or other bakery products from it. Wheat is the most important bread grain in the world (Arjanne et al., 2006).

Example from Eco Learn diary:

> Pupils were able to concretely feel the wheat grains in their hands, smell the earth and the newly picked grain, see the different colors of green that countryside was composed of, hear the wind that blew through the field and close by forest, the insects humming and sun warming their cheeks while they examined the moist grains in their hands. While experiencing this, pupils' were listening to the farmer telling about various facts on wheat and how it is taken care of. After this, pupils were allowed to continue on the route of bread to milling grains and later in the afternoon to baking their own bread, as a finale and ending on the route of bread.

Hands-on activities have been found as a successful learning method in research (Mabie & Baker, 1994) as well as in educational theories (Kolb, 1999; Palmer, 1998). Especially first hand experiences and interactive learning situations have been found as an advantage of outdoor education (McRae, 1990). These are especially important in forming of personal opinions, values and attitudes (Palmberg & Kuru, 2000; Frederiksen, 2001, p. 156; Balschweid, 2002). Positive attitudes towards environment have been found to increase after outdoor educational programme (Mittelsteadt, Sanker, & Vanderveer, 1999) and be equally positive amongst urban and rural pupils (Frick et al., 1995). However, urban and rural pupils have been found to have a different view on agriculture as their contextual circumstances influence their constructions of rurality (McCormack, 2002).

It has even been argued that pupils can learn as much or more on a field trip, as in the classroom (Bitgood, 1989). Outdoor learning experiences have also been found to be more effective

for developing cognitive skills than classroom based learning (Eaton, 2000 in Dillon et al., 2006) and pupils who participated in outdoor environmental learning scored higher in academic assessments (State Education and Environment Roundtable (SEER), 2000; Kern & Carpenter, 1986 in Dillon et al., 2003).

Outdoor education is a component of the basic education in Finland in form of field trips and camp schools (NCC, 2004). Camp schools are defined as education that takes place in a different location than education as usual. A camp school lasts for consecutive days including overnight lodging (usually 3-5 nights). Camp schools should support teaching, studying and learning processes at least in one subject or through an integration of different subjects. Pupils follow the same rules on camp school as in school (Sipilä, 1997). In a study by Miemois (2005), where 92 Finnish Swedish speaking elementary schools participated, a total of 90% of teachers claimed that they are planning to take part in a camp school during the next two years. Camp schools are most popular in the grades 5 and 6 (12-13 years old pupils). They are not compulsory but were found to be encouraged by school traditions and teachers' personal experience on the benefits of camp schools. The most popular time to arrange camp schools were in early autumn or late spring, the beginning or the end of the school year. Typical themes for camp schools were nature and environment and the building of pupils' social competence, but also adventure, physical and cultural activities were seen as important. Camp schools are usually arranged by sports institutes and other nature, youth or camp centres according to Finland's Camp School Association. The programmes are usually prepared by the organization arranging the camp school, and from these teachers can choose the ones that are appropriate for their classes. Schools can also arrange their own camp schools. In this case, participating teachers plan the programme based on curricular goals. They also act as responsible instructors. Basic education is according to Finnish law free of charge, including camp schools. Camp schools are therefore financed by different happenings organized by pupils and their parents, school funds and other fundraising. Parents' participation in fundraising is important and some parents often participate in camp schools as guardians, but the liability is the teachers. (Miemois, 2005.)

Although, outdoor education possesses many excellent qualities, it is no *lapis philosophorum* of education. Negative aspects are that pupils might not feel comfortable learning outdoors (e.g. phobias, learning style suited for class room), it might be a health risk (e.g. allergies) or it might be impossible for pupils to access the area (e.g. physically challenged). Other criticism is that too much focus on the individual learning might diminish the social aspects of learning (O'Neill & McMahon, 2005). The learning situation might also become too unguided for pupils optimal gain of knowledge and consist more of fun and doing than of learning (Kirschner, Sweller, & Clark, 2006). There is also conflicting results on outdoor educations impact on knowledge and attitudes, as some studies have shown negligible impact (Knapp & Barrie, 2001).

## Theoretical Background

Theories that Eco Learn is based on are Outdoor education theory (Knapp, 1996), the Environmental Education model (Palmer & Neal, 1994; Palmer, 1998), constructivist conceptions of learning (Davis et al., 1993), and experiential learning theory (Kolb, 1981, 1984) (Figure 1). The main purpose of "outdoor education" is to provide meaningful contextual experiences--in both natural and constructed environments--that complement and expand classroom instruction, which tends to be dominated by print and electronic media (Knapp, 1996). It is a broader term than "environmental education," which can be described as instruction directed toward developing a citizenry prepared to live well in a place without destroying it (Orr, 1994). Environmental education can occur both inside and outside the classroom. Constructivist conceptions of learning

assume that knowledge is individually constructed and socially coconstructed by learners based on their interpretations of experiences in the world. Since knowledge cannot be transmitted, instruction should consist of experiences that facilitate knowledge construction (Davis et al., 1993). Experiential learning theory defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" (Kolb 1984, p. 41). The content for the educational programmes is from NCC (2004). These theories can be seen to be related with each other and NCC and are therefore integrated to form the theory base for Eco Learn (Figure 1).

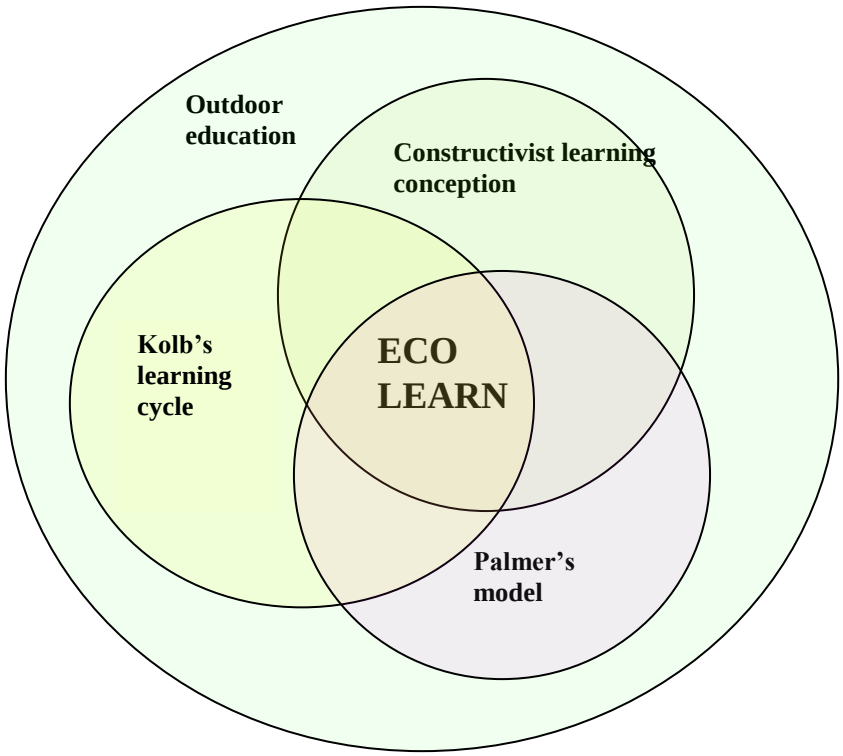


Figure 1. The Theory Base for Eco Learn (Kolb, 1981; 1984; Davis et al., 1993; Knapp, 1996; Palmer & Neal, 1994; Palmer, 1998)

According to Knapp (1996), it is generally agreed that outdoor education includes the study of both the natural and artificial (man-made) environments. Knapp means that the outdoor education can begin with the first step outside the school building. Gair (1997) continues to define the concept as all activity that includes education in the outdoors. Outdoors can be found in a city or in countryside, in a natural environment or an environment that have been under human influence. By this definition, Gair leaves out education that takes place indoors, e.g. in a farm house, what Knapp's definition do not. Even though, he does emphasize that outdoor education is a multifaceted concept that can not be simply defined. A rural farm environment includes both outdoor and indoor premises that can be used in education and it is also situated outside elementary school areas.

The constructivist learning conception (Ausubel, 1963; Davis et al., 1993) is a corner stone of Finnish education and the importance of individual constructivist learning processes are under-

lined by the first phrase on learning theories (conception of learning) in NCC (2004). NCC also emphasizes the importance of active and contextual learning. Therefore, the importance of a multifaceted learning environment is seen as an essential component of education. The importance of nature values in Finland is also seen in National Core Curriculum for Basic Education (2004, p. 14), as sustainable environment is mentioned in the first phrase on the base values for elementary education. Food and themes related to it are naturally something that all pupils have a personal contact to and some level of information of. Food and food chain is therefore a good theme to work on from a constructivist aspect. Constructivist learning is also promoted by preparatory and follow-up activities to all programmes and by connecting all programmes to NCC (2004) and school work.

The ideas of active participation are incorporated in the Environmental Education model of Palmer (1998). Palmer and Neal (1994) define EE as: 1) education about the environment, which builds awareness, understanding, and the skills necessary to obtain the understanding; 2) education in (or from) the environment, where learning occurs outside of the classroom, e.g. in nature; and 3) education for the environment, which has objectives related to nature conservation and sustainable development. These dimensions are important when creating a deep bond between a child and a place (Louv, 2008, 156-159). This is achieved in Eco Learn by offering an authentic learning environment, meaning that pupils are allowed to study and to learn by observation, listening and practical doing about a subject (e.g. wheat) and processes related to it (e.g. growth, harvesting) in its authentic environment (e.g. wheat field). An appropriate level of knowledge for pupils is achieved by connecting programmes to NCC and school work. An appropriate knowledge level together with a positive learning atmosphere created by Eco Learn trained farmers will promote positive attitudes and actions of pupils.

Kolb's experiential learning theory is circular and has four stages that follow from each other (1984). The stages are concrete experience, reflective observation, abstract conceptualization and active experimentation. The learning cycle can also be seen as a spiral, where the topic is deepened during each spiral cycle. Kolb and Fry (1975) agree that the learning can start at any of the four stages, depending on the learner's learning preferences. Kolb (1999) has further developed his theory to a learning style inventory, which argues that people have different preferred learning styles. His learning cycle has also been further developed by Honey and Mumford (2000). Kolb's learning cycle can be entered at any stage (1984) so in Eco Learn.

## Materials and Methods

Farms offer a multitude of possibilities for educational use, but combining the educational aims of NCC and theories of environmental and experiential education, safety issues, farmers and teacher's workloads, narrows the amount of educational themes. Eco Learn is built up of two components, a development component and a research component. The successful programmes of the development component form the base for the research component. This article is briefly describing the development of the educational programmes for farms in the development component and in the research part focusing on pupils' expectations and experience and teachers' experiences. The material was gathered during 2003–2005 in Southern Finland. The urban pupils were from Helsinki region and the rural pupils from Häme region. The farmers and teachers were from Southern Finland.

The camp school programme was built up in the development component and based on views of Outdoor Education by Knapp, the Environmental Education theories by Palmer and experiential learning theory by Kolb. The content of the programme was based on NCC (2004).

The programme was done in co-operation with 13 in-service elementary school teachers (the grades 5–6), 11 farmers and 10 experts on agricultural and educational issues.

In the research component, qualitative and quantitative methods were used, such as questionnaires with closed Likert-scaled questions based on mood research, open-ended questions, observation diary and interviews. The participants in the study were a total of 161 pupils in the grades 5 and 6 (12–13 years old), 20 in-service elementary school teachers (the grades 1–6) and five participating farmers. 85 of the pupils were from urban schools and had seldom or never visited a farm and 76 from rural schools and had visited farms before. Development component
Eco Learn was an EU LIFE-funded project in co-operation between Agropolis (project management), MTT- Agrifood Research Finland, Finfood – Finnish food information agent, Educational unit at University of Helsinki, Häme Polytechnic, ProAgria – Rural advisory center, and The Central Union of Agricultural Producers and Forest Owners (MTK). Team leaders were gathered from participating organizations to form teams with different tasks and to invite experts needed (management, dissemination, camp school themes, educational programmes, web-pages, handbook, schooling for teachers and farmers, quality criteria and research).

Camp school theme-team included experts on agricultural, cultural and educational issues, teachers, and farmers. They joined in a work shop where they decided on five nationally and globally topical themes. These were 1) Rural landscape and diversity, 2) Rural environmental history and culture, 3) Empowerment of rural-urban interaction, 4) Sustainable choice of food and ecological footprint and 5) Food security. Educational programme-team further developed the five themes to form two versions (one for 11–13 years old and one for 14–16 years old pupils) on the basis of the educational requirements of NCC (2004). Each model was designed to comprise of three phases: 1) preparatory activities for motivation and basic facts, 2) experimental part at the farm, and 3) follow-up activities, where pupils were reflecting and using the information that they had gained. Results of testing, retesting and validation of the thematic action models were 10 successful educational programmes that fulfill the theoretical principles of Palmer, Kolb and the educational goals of NCC that also takes into consideration the restrictions and possibilities of different farms. These Eco Learn educational programmes for rural camp schools can be found in Finnish on https://portal.mtt.fi/portal/page/portal/Maalleoppimaan/Leirikoulut/kasikirja (retrieved June 29, 2010).

The development process for Eco Learn rural camp school programmes consisted of five steps (Figure 2). To begin with, the substance and aims for the five themes that were mentioned earlier were developed in workshops. Secondly, the substance, including preparatory, action and follow-up activities, was fitted with suitable teaching methods which were evaluated by the teachers. Thirdly, the substance and methods were fitted with farm resources and evaluated for workability with the farmers. The fourth step was to evaluate how the themes and the educational programme as a whole worked in practice with pupils. The fifth step consisted of the creating a handbook for rural camp schools that included theory on environmental and experiential education, the thematic educational programmes, safety regulations and practical camp school material.

## Research Component

The aim of the study was to learn about pupils' expectations and experience and teachers experience on outdoor education in rural settings. Mixed methods approach was used in this research (Cresswell et al., 2003; Johnson & Onwuegbuzie, 2004). A mixed methods approach requires qualitative and quantitative methods that support each other and give extra value to the research when used together. For studying pupils expectations and experiences were observation (during

camp school), questionnaires (before and after camp school) and open interviews (during camp school) used. For studying teachers' experiences a questionnaire was used. For research validity these teachers were from different schools than the ones that took part in the development process of the programmes. The qualitative results are analysed by inductive content analysis (Graneheim & Lundman, 2004; Tuomi & Sarajärvi, 2004; Elo & Kyngäs, 2008).

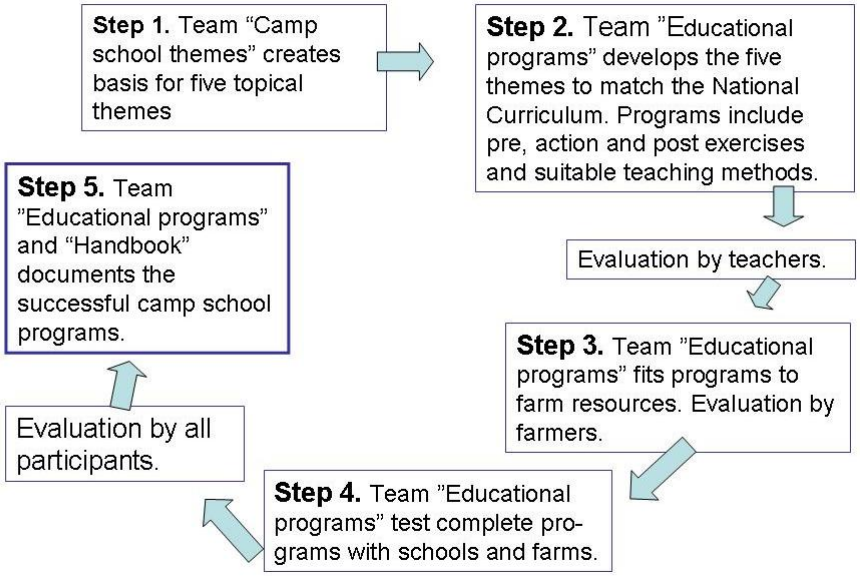


Figure 2. Development of Eco Learn Camp School Programmes

*Observation and Interviews*

Observation and interviews were used to gather a comprehensive image to fulfill the information gathered by questionnaires. This was done by one researcher (to improve validity and reliability) freely and according to what naturally fitted the situation during the camp school. This means in practice that the researcher kept a short introduction followed by theory and then practical work during which the researcher, research assistants, farmer and teacher guided the pupils. The researcher observed and shortly interviewed pupils while she guided them and made longer interviews with pupils after programmes during the camp school. Interview questions were freely formed according to the situation. Documentation of observations was done by photographing and by notes in writing during the programme or directly afterwards. Documentation resulted in 288 photos and 12 pages of personal notes.

*Questionnaires*

The pupils' questionnaires consisted of a total of ten questions (two questions in pre-questionnaire and eight questions in post-questionnaire) that were shaped to measure two major issues; pupils' expectations and experiences on learning in rural settings. Three questions were closed and consisted of a Likert-scaled statement based on mood research. The Likert-scaled consisted of three steps imaged by three faces; happy (☺), indecisive (😐) and sad (☹). The happy

face indicated that the pupil agreed with the statement. The indecisive face indicated that the pupil neither agreed nor disagreed with the statement. The sad face indicated that the pupil disagreed with the statement. After each of these statements pupils were allowed to describe why they had answered as they had. These answers could later be used to give a deeper analysis of the closed questions. Seven questions were open-ended and pupils could freely answer using their own words. By open-ended questions, the authors wanted to gather information that is difficult to get by using only closed questions. The open-ended questions were also used to achieve interrelated reliability of the answers. Questionnaire was tested on a pilot group (17 pupils).

Teachers' questionnaire was composed of 14 questions; 11 closed or Likert-scaled (1–5) and 3 open-ended questions. (Likert scale 1–5 where: 1=totally agree, 2=agree, 3=no opinion/indecisive, 4=disagree, 5=totally disagree). All closed or Likert-scaled questions offered extra lines, if the teacher wanted to clarify hers or his answer. The aim of the questionnaire was to clarify teachers' experiences (content, methods, usability, need of training) of the developed educational programmes. Questionnaire was tested on seven colleagues.

*Inductive Content Analysis*

Inductive content analysis was chosen to be the main analysis method as it is sensitive to context, systematic and objective, and therefore enables a reliable qualitative conclusion (Elo & Kyngäs, 2008). The analysis is based on logical reasoning and interpretation from the respondent's point of view and consists of three phases; preparation, organization and reporting. The preparation phase consisted of selecting units for analysis and making sense of the data as a whole by thoroughly reading through the material.

Thereafter, inductive approach was chosen to be the analysis method for the organization phase. The organization phase consisted of open coding, creating categories and abstraction. Open coding, meaning reading and rereading, is used to identify concepts that describe the content of the material. In this material, some concepts could be identified to appear more often than others (e.g. animal or countryside) and were given a heading status. Concepts that have a similar meaning were identified (e.g. "fun" and "enjoying") and these were grouped together under same heading (e.g. "fun"). Latent content was left out as some concepts can refer to several things, for example "it" in the phrase "Because it is a peaceful place." can refer to countryside, a barn or a forest (Table 1).

Grouping was done by combining and re-combining headings until groups that were logical and not overlapping were formed. This was done manually by cutting a copy of the material and assembling similar concepts in piles under logical headings (Table 2). This is a first phase grouping, as e.g. the concepts "fun" and "love" is still to be categorized. Countryside and agriculture are put in the same general category as the concepts are often falsely used (in Finnish) to describe the same topic. This might be due to the cause that the Finnish words "maatalous" (agriculture) and "maaseutu" (countryside) resemble each other.

Table 1. Authentic Answers From The Data

| |
|---|
| o I love animals. |
| o Well, I like animals and being in the countryside! |
| o Because I knew that we would see some animals. |
| o It's more fun in the countryside. |
| o Because it is a peaceful place. |
| o It is more peaceful and quiet on the countryside than in the city, and it would be nice to know more about the farm. |

Table 2. Three Groups Identified; Animals, Countryside/Agriculture and Peace And Quiet

| **Animals** | **Countryside/agriculture** | **Peace and quiet** |
|---|---|---|
| I love animals. | …being in the countryside! | Beacuse it is a peaceful place. |
| Well, I like animals... | It's more fun in the countryside. | It is more peaceful and quiet on the countryside than in the city… |
| | …it would be nice to know more about the farm. | |

These three groups are linked under a common heading. Usually, naming by content characteristic concepts is done first in the abstraction phase, but as the identified group headings logically described the material and were distinctive (as is required), the group headings were transferred straight to abstraction phase category names. Abstraction means creating a common description of the research material through constructing categories, as main category, generic category and sub-category (Figure 3). The identified categories were further quantified to give a broader image of the results.

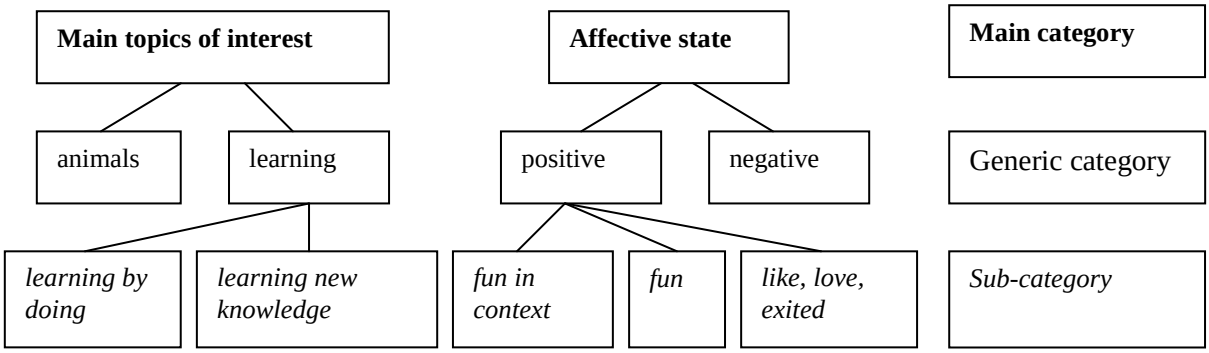


Figure 3. Examples of the Identified Categories and Their Levels

Reliability and validity in inductive content analysis are concurrent with other research methods. Reliability in content analysis is best done by intercoding. This means that different researchers open code the same material and then the result of categories and abstraction are compared (Burla et al., 2008). Even experienced intercoders make errors and errors can only be minimized, not eliminated, why it is suggested that 80% is an acceptable margin for reliability (Gottschalk, 1995). Intercoding was done by two intercoders, match 85%. Categories were adjusted according to intercoding. Reliability of analysis is increased when describing the analysing process in detail when reporting the results. Links between the data and results can be shown by authentic examples from the material and by tables (Elo & Kyngäs, 2008). The validity of the analysis was increased by doing the analysis manually. This leaves out the problem with pro-

grams that react or do not react on misspelled words or on words that are spelled similarly but have a complete different meaning (e.g. mine, a possessive pronoun or explosive device). Validity of the research is increased by authentic citations by showing from where or from what kinds of original data categories are formulated (Patton, 1990).

## Results

The aim of the developed outdoor educational programmes in rural settings was to clarify for pupils the route of food and to offer a personal, positive and realistic image of the countryside. The aim of the research was to investigate the pupils' expectations and experience on studying and learning and if there are any differences between urban and rural pupils. This was done by observation and interviews during camp school and questionnaires before and after camp school that contained closed and open-ended questions. Teachers' experiences were studied by a questionnaire. The presentation of results is divided in sections according to the research questions and the material used is from the research component. All participating classes were assigned preparatory and follow-up activities, all rural pupils completed these but only one urban class (25% of the pupils).

### Pupils' Expectations

When the pupils were asked about their general opinion to taking part in outdoor education in rural settings on three step scales, 73% of the urban and 67% of the rural pupils had positive expectations (Table 3). One urban pupil gathered the feelings of many of her classmates: "Because, we would be close to animals on a peaceful farm." Another urban pupil said: "I'm very excited as I like nature and countryside." The rural pupils expected learning on a farm to be fun, interesting and practical learning. One pupil put it in one phrase: " It is much nicer to learn by doing than to learn by books". All pupils did not have a clear opinion (urban 23% and rural 33%) or did have a conflicting view on learning in rural settings. Typical indecisive comments from both the urban and the rural pupils were: "Well, I don't know." or "It is ok." The conflicting view came clear in content analysis as the result for negative affective value was higher than the 4% for the urban pupils, and 0% for the rural pupils that was result from the mood scale. A typical negative answer was that the pupils would have rather been somewhere else; this is examined closer further down.

Table 3. Pupils' general opinion on learning in rural settings. Left column of the table demonstrate pupils' general opinion (positive ☺, indecisive 😐 or negative ☹). The middle and right column of the table show the result as a percentage on how many of the urban or the rural pupils marked a specific mood. A total of pupils is 161 (85 urban and 76 rural pupils ).

| **General opinion** | **Urban %** | **Rural %** |
|---|---|---|
| Positive | 73 | 67 |
| Indecisive | 23 | 33 |
| Negative | 4 | 0 |
| | **100** | **100** |

Inductive content analysis resulted in two main categories, eight general categories and five sub-categories (Figure 4). Pupils' expectations on learning in rural settings were divided into six main topics of interest; animals, countryside/agriculture, peace and quiet, learning, variation and possibility to be away from school. Animals were often mentioned together with a positive affective value e.g. "I love animals. " Most pupils who mentioned animals did not further explain what animals they expected e.g. "It is nice to meet countryside animals." Countryside or agriculture was a typical answer among the urban pupils as was peace and quiet, e.g. "It is more peaceful and quiet on the countryside than in the city, and it would be nice to see more about the farm." The rural pupils expected more learning and new knowledge, especially by learning through practical action, e.g. "Because you would get to drive a combine harvester." and "You get to use machinery." Variation refers to variation in learning environment, e.g. "It is nice to study in different scenery." and "Because it sounded nice to study in another place than school."

Away from school refers to pupils comments that they want to learn in rural settings just to be somewhere else than in school, typically e.g.: "Because you don't have to be in school." Many affective values were found in the material regarding learning in rural settings, these were mainly positive, e.g.: "It sounds fun." and "It is fun to go to the countryside when you study in Helsinki." Negative expectations commented by an urban pupil: "I have bad prejudiced of countryside.", by an urban pupil: "I had other plans on doing at home.", by a rural pupil: " It is boring there." and by two rural pupils: "I do not know. I have probably been there too many times." and "It is far away."

The quantification of inductive content analysis shows the frequency of the different categories among the urban and the rural (Table 4). Results of the quantification reveal that there are some differences between the urban and the rural pupils. More urban pupils (22%) than rural pupils (8%) expected to see animals. The urban pupils expected to experience countryside/agriculture (21%), variation to a normal school day (14%), and peace and quiet (5%). The rural pupils did not mention these topics, but expected learning (29%), especially learning by doing (22%), and learning of new knowledge (7%). Both the urban (6%) and a few more rural (13%) pupils thought that one of the best things was to be away from school. Affective values were found in the analysis. Positive affective values did not differ much between the urban (45%) and the rural (46%) pupils. Fun in context was expected by 34% of the urban and 41% of the rural pupils. Fun unrelated to context was brought up similarly by the urban and the rural pupils

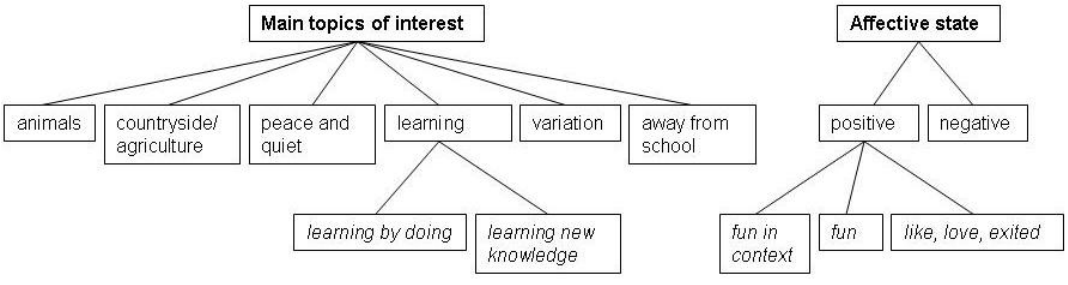


Figure 4. Table on the results of inductive content analysis of the pupils' expectations. The categories are horizontally from above: main category (thickened), generic category (normal text) and sub-category (cursive).

Table 4. Table on results of quantified inductive content analysis on the pupils' expectations. Left column includes main category (bold), generic category (*) and sub-category (**). Next two columns indicate how many times these concepts are found among the urban pupils and the rural pupils as a percentage. A total of pupils is 161 (85 urban and 76 rural pupils).

| Categories | Urban % | Rural % |
|---|---|---|
| **Main topics of interest** | | |
| * animals | **22** | **8** |
| * countryside/agriculture | **21** | **0** |
| * peace and quiet | **5** | **0** |
| * learning | **0** | **29** |
| ** *learning by doing* | **0** | **22** |
| ** *learning new knowledge* | **0** | **7** |
| * variation | **14** | **0** |
| * away from school | **6** | **13** |
| **Affective state** | | |
| * positive | **45** | **46** |
| ** *fun in context* | **34** | **41** |
| ** *fun* | **26** | **28** |
| ** *like, love, exited* | **11** | **5** |
| * negative | **8** | **11** |

(urban 26%, rural 28%). Negative affective values did differ only a bit between the urban (8%) and the rural (11%) pupils.

**Pupils' Experiences**

When pupils were asked about their general opinion on using rural settings for educational use in the future, 82% of the urban and 81% of the rural pupils had positive opinion (Table 15). Inductive content analysis resulted in two main categories, seven general categories and seven subcategories (Figure 5). The pupils' experiences on learning in rural settings were divided into five

Table 5. Pupils' general opinion on their experience of learning and studying in rural settings. Left column of the table demonstrate pupils' general opinion (positive ☺, indecisive 😐 or negative ☹). The middle and right column of the table show the result as a percentage on how many of the urban or the rural pupils marked a specific mood. A total of pupils is 161 (85 urban and 76 rural pupils).

| General opinion | Urban % | Rural % |
|---|---|---|
| Positive | 82 | 81 |
| Indecisive | 15 | 18 |
| Negative | 4 | 2 |
| | **100** | **100** |

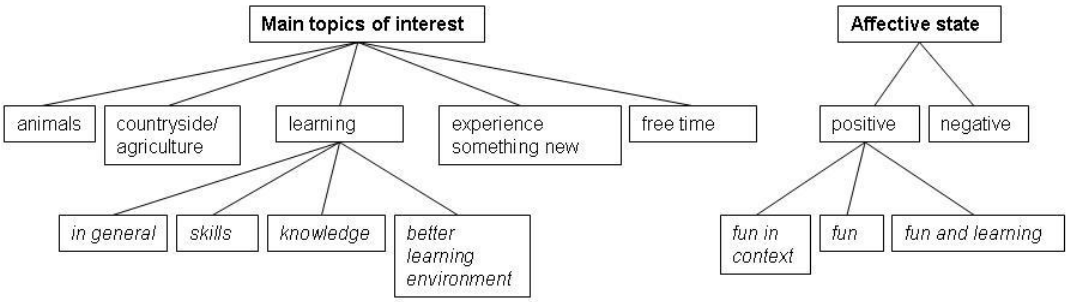


Figure 5. Table on the results of inductive content analysis of the pupils' experiences. The categories are horizontally from above: main category (thickened), generic category (normal text) and sub-category (cursive)

main topics of interest; animals, countryside/agriculture, learning, experience something new and free time.

All comments on animals were such as: "It is fun to take care of animals." or " .., because us children learn all about taking care of animals." Only one urban pupil mentioned a specific animal: "Yes, because you learn new things if you spend time with e.g. a cow (if it is your favorite animal, as it is for me)." Countryside or agriculture was a topic that was brought up several times in comments as by one urban pupil: "Yes, many do not know about agricultural work, only about computers. You get more knowledge there (*the farm*) and interesting stuff." or as one rural pupil said: "Yes, as future people should learn rural talents." Learning was the most common concept brought up by all pupils, the most important reason why rural settings should be used in the future for educational use. Learning could be divided into four sub-categories; in general, skills, knowledge and better learning environment. Learning in general that is not defined any further is seen in this comment of an urban pupil: "City-children would learn a lot on a farm." and in this expression of a rural pupil: "Yes, as you learn there." Learning that is defined to learning skills in rural settings are seen in this urban pupil's comment: "Because you learn to take care of animals." and in this rural pupil's comment: "Yes, as you learn farm work.". Learning new knowledge was brought up in comments as by one urban pupil: "Yes, you can learn about many new things there." and one rural pupil: "…so no-one would think that grain is made e.g. out of plastic." Rural settings were also considered to be a better learning environment than an ordinary school class. Comments by urban pupils are such as: "One does concentrate better there and it is a nicer learning environment.", "Yes, it should, as you can illustrate better there.", "…as you can somehow concentrate better there." and "One is able to listen better there." and by rural pupils such as: "Yes, you get inspired to read more on the subject." and one rural pupil commented: "… you see what grains and others really look like! It is completely different than writing in your book and drawing pictures!" Positive and negative affective values were also found when the pupils described their experiences on learning in rural settings. Positive affective values were divided into three sub-categories; fun in context, fun and fun and learning. Fun in context describes fun related to a context. E.g. an urban pupil commented: "It is fun to be on a farm in the countryside." and a rural pupil said: "Absolutely YES: as it was much more fun than sitting inside a musty classroom." Fun as a concept not clearly related to any context, e.g. "It was fun." or

"It is fun.", was also found. Fun and learning sub-category includes comments that clearly indicate that it is both learning in rural settings is both fun and educative. Comments of an urban pupil show it: "Because it is fun on the farm, but you learn at the same time." of an urban pupil: "Because it is fun and you learn there.", and of a rural pupil: "Yes! Absolutely as it is fun and educative." Negative affective values were also found. The urban pupils who were of the opinion that rural settings should not be used in the future commented: "Probably not, it was quite common." or "No it should not, it was no use.". The rural pupils that had negative affections commented in similar way: "No, as almost everyone knows what you do there." and "I do not like being there so much".

Based on the observation diary, the pupils found the learning situations on the farm being fun and effective. They enjoyed a different school day and taking care of animals. The preparatory activities were necessary and helped the pupils to prepare for the action day. Things that the pupils best remembered from the action day were those in which they had been active by themselves (cooking, making cheese), experienced by their senses (taste, smell) or things that had induced or provoked feelings (small animals, exiting old objects). The only things that got negative reply were the smell in the barn and the choice of weekday (some pupils had other plans for the day).

The quantification of inductive content analysis shows the frequency of the different categories among the urban and the rural pupils in general (Table 6). Results of the quantification reveal that there are some differences between the urban and the rural pupils.

Animals were mentioned by 11% of the urban and 1% of the rural pupils. This difference is caused by the program, as rural settings visited by the rural pupils did not have as many animals as the urban pupils did. Countryside or agriculture was mentioned by 19% of the urban and 5% of the rural pupils. The educational use of rural settings was seen important by the pupils as more than 50% commented positively on learning (urban 52%, rural 58%). Learning in general was brought up by 24% of the urban and 21% of the rural pupils. Learning of skills was mentioned a

Table 6. Table on results of quantified inductive content analysis of pupils' experiences. Left column includes main category (bold), generic category (*) and sub-category (**). Next columns indicate how many times these concepts are found among the urban and rural pupils. A total of pupils is 161 (76 rural and 85 urban pupils).

| **Categories** | **Urban %** | **Rural %** |
|---|---|---|
| **Main topics of interest** | | |
| * animals | **11** | **1** |
| * countryside/agriculture | **19** | **5** |
| * learning | **52** | **58** |
| ** *in general* | **24** | **21** |
| ** *skills* | **9** | **13** |
| ** *knowledge* | **6** | **12** |
| ** *better learning environment* | **13** | **12** |
| * experience something new | **6** | **0** |
| * free time | **5** | **8** |
| **Affective state** | | |
| * positive | **24** | **29** |
| ** *fun in context* | **14** | **20** |
| ** *fun* | **9** | **9** |
| ** *fun and learning* | **7** | **12** |
| * negative | **8** | **8** |

bit more among the rural pupils (urban 9%, rural 13%). Learning of new knowledge was brought up a bit more among the rural pupils (urban 6%, rural 12%). Both the urban (13%) and the rural (12%) pupils mentioned that a rural setting has better qualities than ordinary classroom for learning. The urban pupils brought up that they can experience something new (6%) in rural settings, which the rural pupils did not. Free time was also commented as a quality of learning in rural settings (urban 5%, rural 8%). Affective values were also found in the analysis. Positive affective values did differ a bit between the urban (24%) and the rural (29%) pupils. Fun in context was brought up by more rural pupils (urban 14, rural 20%). Fun in general was brought up equally by the urban and the rural pupils (9%) . Fun and learning was brought up by both groups (urban 7%, rural 12%). Negative affective values did not differ between the urban and the rural (8%) pupils.

**Teachers' Experiences**

Almost all teachers (85%) totally agreed or agreed that the educational programme tailored for outdoor education in rural settings support NCC. The rest of the teachers (15%) had no opinion. The teachers remarked that the models correspond with the year scheme of the different subjects what are addressed. Based on the answers of the teachers, the programmes support teaching in class or used as a teaching method on the subject concerned. A teacher said: "…e.g. in Biology there are subjects that are more suited for camp schools, e.g. forest, mushrooms and plants (biodiversity), so if the teacher could agree (with the host or guide at the rural camp school) that e.g. the forest or mushroom excursion would take place in the camp school, then she (the teacher) could without worry move the subject to be learnt exclusively during the camp school." Two teachers commented negatively that one of the programmes was somewhat difficult for their pupils and that there was not enough time reserved to carry out the programme they participated in. When the teachers were asked, if outdoor education in rural settings motivated pupils to study better than more conventional education in the classroom, the most teachers thought that the programmes motivate pupils' better than ordinary teaching (70% totally agreed, 25% agreed, 5% had no opinion). The teachers remarked that outdoor education offers concrete examples, learning by doing, first hand knowledge, and affective values as awakening of environmental sensitivity, which cannot be easily achieved in conventional classroom education. The teachers thought in general that a subject is more effortlessly comprehended when pupils can participate more concretely in the learning process. The teachers totally agreed (84%) or agreed (16%) that the pupils liked to participate in the outdoor educational programmes in rural settings. A teacher mentioned: "One pupil said to me that he would probably never get the chance to touch a sheep if they had not com here (to the farm)". When the teachers were asked, if they noticed any new aspects or sides in their pupils during the programmes, 21% of the teachers totally agreed, 32% agreed, 42% were of no opinion or indecisive and 5% disagreed. A typical answer was: "There are always those pupils that are better in practical subjects than in theoretical". One teacher also commented on her silent pupils: "Even the quiet pupils live up".

When the teachers were asked about their needs for in-service education to carry out outdoor education in rural settings, the answer was that in-service education is needed every second year, according to 58% of the teachers. 26% of the teachers would like participate in in-service education every year. The rest (6%) did not wish to participate in in-service education, as they experienced that they managed the programmes well. On site training was thought to be a good education method among teachers.

### Main Findings

Concerning the pupils' expectations about 70% of all pupils have a general positive opinion, but there are differences between groups. In the inductive content analysis, about 45% of the pupils brought up positive affective values and about 10% negative values. Differences between the urban and the rural pupils' expectations were mainly that the urban pupils expected to see countryside/agriculture, variation, and peace and quiet. The rural pupils for their part expected learning (learning by doing and learning new knowledge).

Concerning the pupils' experiences about 80% of all pupils have a general positive opinion. More than 50% of all pupils brought up learning as a quality of rural settings. The pupils brought up that rural settings are a better learning environment than an ordinary classroom and offer a combination of fun and learning. Concerning teachers' experiences most teachers (85%) found that the Eco Learn programmes support teaching and NCC. They also experienced that the programmes motivate pupils to study better than ordinary teaching (70%). Teachers are able to carry out a more varied lesson outdoors than indoors and they can also include more concrete examples, learning by doing and first hand knowledge in their education. More than half of the teachers wished in-service education on outdoor education in rural settings every second year. They also mentioned that a handbook on its own is not enough.

## Discussion

The aim of Eco Learn, a rural camp school project, was to develop comprehensive educational programmes on countryside and food production. The aim of the programmes was to clarify in a concrete way for pupils the route of food, the understanding and respect of nature by demonstrating a sustainable relation between man and nature in agriculture, and to offer a personal, positive, genuine and realistic image of agriculture and the countryside. In the research component, the aim was to investigate the pupils' expectations and experiences, as well as teachers' experiences, on learning, studying and teaching in a farm environment and study possible differences between urban and rural pupils. This was done by observation during camp schools, interviews and pre- and post-questionnaires that contained closed and open-ended questions.

## Educational Challenge

Learning theories and conceptions that Eco Learn is based on are Outdoor education theory (Knapp, 1996), constructivist learning conception (Davis et al., 1993), the Environmental Education model (Palmer & Neal, 1994; Palmer, 1998), and experiential learning theory (Kolb, 1981; 1984), while the content for the educational programmes is from NCC (2004). Contents chosen from NCC for the programmes were ones that logically fit in rural settings e.g. the route of food. Outdoor education theory by Knapp (1996) is realized by teaching in rural settings, both indoors and outdoors. Constructivist learning conception is taken into account by binding the programme to NCC and by supporting pupils' active participation (Davis et al., 1993). The Environmental Education model is part of Eco Learn as the programmes fulfill the criteria of learning about, from and for the environment, by including e.g. knowledge and understanding, skills and first-hand experiences. Based on Kolb's experiential learning theory (1981, 1984) the Eco Learn programmes make up one major instructed learning cycle that might include several personal spontaneous minor learning cycles. For example, the major learning cycle on the "Route of bread" can start with "abstract conceptualization" in school by doing preparatory activities on what a farm is and what bread is and where it comes from. The second stage "active experimentation" can also

partly take place in school, where the teacher and pupils plan what to do in the rural settings, plan what they want to ask the farmer, and partly on the farm and in the wheat field, where pupils get to study wheat more closely. The third part on Kolb's learning cycle and the route of bread is "concrete experience", where pupils get first-hand concrete experience on harvesting wheat, milling and making of wheat bread. The fourth and last part of Kolb's learning cycle, "reflective observation", can take place partly on the farm, where pupils discuss their experiences, and partly in school where gained knowledge is deepened and reflected on and then the cycle can start again. Minor spontaneous learning cycles might also take place when pupils start to do their own experiments. A minor cycle can be formed e.g. when a pupil wants to taste what wheat tastes like. He might take a seed of a wheat spike and taste it and discover some extra bits that get caught between his teeth (concrete experience). He may discover that the seed has a rind that needs to come of before eating it (reflective observation). He might ask the farmer how he can get rid of the rinds on the wheat seed, and the farmer shows him how (abstract conceptualization). He might then plan how to peal and eat several wheat seeds at the same time (active experimentation). This minor learning cycle could be seen as a spontaneous and free-standing part of the major learning cycle.

*Research Question 1. What kinds of expectations do urban and rural pupils have on studying and learning in outdoor rural settings?*

Differences in the pupils' general opinions of expectations on studying and learning in outdoor rural settings are not large and have the same trend among the urban and the rural pupils; about 70% have a positive, 20-30% an indecisive and a few urban pupils a negative opinion. Frick et al. (1995) have also found a similar tendency; a positive agricultural perception independent of knowledge level or geographical living location. According to content analysis, both groups brought up equal amount of positive and negative values. In contradiction to the general opinion, there were more negative values revealed in content analysis compared to the amount found in general opinion. This might be due to the method, as the opinion scale only consisted of three steps (positive, indecisive, negative). A 5-step scale could have given more variation. It is good to take into account when analyzing written emotions that there are often few pupils' that express negative or positive values even if they do not mean it. Negative values can be expressed because the pupil thinks it is tough or because he or she wants to oppose "authority", especially as pupils aged 12-13 years are in the beginning of puberty (Susman & Rogol, 2004). False positive values can be expressed when pupils want to "please" and give a "wanted" answer. Learning is a social situation and that social structures in class might affect pupils' emotions and learning experience and therefore the result. One explanation would also be that the negative comments that were brought up did not be important enough to affect the general opinion.

Inductive content analysis revealed a clear difference between the urban and the rural pupils' expectations; the urban pupils expected more countryside/agriculture in general and romantic countryside values as peace and quiet and as well as variation and the rural pupils mainly expected learning. An explanation is the cultural and geographical background; the rural pupils have been in outdoor rural settings before or seen countryside and agriculture; it is nothing new for them. Learning in outdoor rural settings is something more concrete for them; their experience tells them that there is not much that they do not know of. The urban pupils might probably not have been to or been only a few times to outdoor rural settings; therefore they might describe outdoor rural settings in general where the rural pupils see details. The urban pupils also brought up concepts that are characteristically considered as romantic values of Finnish countryside (animals in the fields, agricultural work, countryside nature, peace and quiet), which also can be seen as values completely different to town settings (variation). McCormack (2002) has also

come to the same conclusion; pupils gather information from sources that are around them. Urban pupils' information on agriculture and countryside might be from anecdotes, documentaries and possible short visits to the countryside, while rural pupils may more rely on lived personal experiences. Most rural pupils had done preparatory activities and only some of the urban, which might also explain some of the different expectations. Urban pupils' expectations were based on personal beliefs and rural pupils' expectations were guided towards learning by educational preparatory activities on the subject. The educational importance of preparatory and follow-up activities in outdoor education is pronounced in reports (e.g. Orion, 1993; Dillon et al., 2003; Schmitz & Wiese, 2006; Dillon et al., 2006).

*Research Question 2. What kinds of experiences do urban and rural pupils have on studying and learning in outdoor rural settings?*

In general, there could be seen a stabilizing effect in the pupils' comments when regarding the development between expectations and experiences, as the urban and the rural pupils comments coincide to a higher degree when describing their experience. About 80% (increase 10%) of all pupils have a general positive opinion; a similar result has been reported by Balschweid (2002). A similar increase in positive attitudes towards the environment has been reported by Mittelstaedt et al. (1999). Balschweid comments that the pupils appreciated the complex nature of animal agriculture as a result of taking the class, and over 80% strongly agreed or agreed being a farmer is a noble profession. In this study, only a small difference was found between the urban and the rural pupils' experiences. The amount of indecisive opinions had reduced, and the total amount of indecisive and negative is approximately the same between the two groups. More negative values were also here found in the inductive content analysis than was to be expected by the general opinion. In general, learning was considered to be the major experience of studying and learning in rural settings. More than 50% of the urban and the rural pupils brought up learning and some pupils (average 12%) considered that the rural settings as a better learning environment than an ordinary classroom. Some pupils (average 10%) also discussed cognitive-emotional values (fun and learning) of studying and learning in outdoor rural settings. This might be linked to the fact that improvements in the affective domain can lead to improvements in cognitive outcomes (Nundy in Dillon et al., 2003) and that outdoor learning experiences have been found to be more effective for developing cognitive skills compared to classroom teaching (Eaton in Dillon et al., 2006). Not to forget is the question the pupils answered: "Should outdoor education in rural settings be used in the future?". The question refers to education and pupils might be expecting that "the correct answer" is learning, and therefore writes it.

Main differences found in the inductive content analysis between the urban and the rural pupils are that the urban pupils brought up more animals, countryside/agriculture and new experiences and the rural pupils more learning of new knowledge, and somewhat more affective values (positive and negative). The variation in programmes explains that the urban pupils mentioned more animals; geographical and cultural background might also explain here why the urban pupils bring up more concepts related to countryside/agriculture and why the rural pupils bring up more knowledge. The rural pupils had also expected learning compared to the urban pupils who expected to experience countryside more in general and variation, which might steer pupils' interests. This is similar to findings by McCormack (2002). Preparatory activities could therefore be important in steering pupils' motivation.

Negative values that were brought up in pupils' experiences could be caused by the fact that this was not a preferred learning environment or that a classroom offers a preferable learning environment that fits these pupils learning style. This is supported by Kolb (1999), who has defined different types of learning styles. According to this research, 5-10% of the pupils might

have a learning style or preference of learning environment that is not favored by outdoor education in rural settings. Negative values can also be caused by many different sources. These pupils are in early puberty, which might affect their feelings negatively. There might also be underlying conflicts between pupils that cause negative feelings. Some pupils might have physiological reasons, as allergies that makes their learning situation uncomfortable and therefore causes negative feelings. Some pupils might rather spend their time with other people, e.g. family, or participate in a hobby or class that they missed by taking part in outdoor education in rural settings. Some pupils might have a personality that require routines or a personality that is not easily adjustable to new situations. These pupils might feel uncomfortable in a new strange environment, as a farm. Then there can also be those pupils that just want to be of a different opinion than the rest of the class, just for the fun of it. These negative values should therefore be interpreted cautiously. These aspects need further research.

*Research Question 3. What kinds of experiences do teachers have on outdoor education in rural settings?*

The programmes developed in Eco Learn were found quite successful by the in-service teachers. They found that the programmes support their teaching and NCC (2004) (85%) and that they motivate pupils to study better than ordinary teaching (70%). Teachers stated that the programmes offer concrete examples, learning by doing, first hand knowledge, and affective values as awakening of environmental sensitivity, which cannot be easily achieved in conventional classroom education. This is supported by many researchers on outdoor education (e.g. Dahlgren & Szczepanski, 1997; Palmberg & Kuru, 2000; Eaton, in Dillon et al., 2006) and also by the pupils' experiences. This indicates that the process to develop a successful educational rural camp school from pupils' and teachers' perspective is achieved. This development process can therefore be recommended for this type of outdoor education. Teachers do not feel comfortable to carry out outdoor education without education. Dillon et al. (2006) have come to the same conclusion. This suggests that Finnish teacher education should take outdoor education more effectively into the curriculum for teacher studies.

Even though, a researcher always tries to be objective, there will still be a subjective side in every study that includes interaction with humans. A study with a qualitative dimension may latently be affected by the researcher's mood, health, environmental factors (e.g. noise, light, temperature) or even the subject of the study. Especially an inexperienced or just enthusiastic researcher might be too eager to interpret situations and answers to fit their expectations that they might draw false conclusions or miss important facts. A study with a quantitative dimension may also be affected by poorly phrased questions or questionnaire, the administration of it and the situation when it is answered. The researcher's familiarity with the analysis program may also affect the result. Therefore all the questions mentioned above were taken into account when planning and currying out the study project.

## Validity and Reliability of the Research

When considering results of this research from the aspect of validity and reliability, one has to bear in mind that several farms with different resources (e.g. different animals) were used. This might cause some differences between the groups but it also strengthens the validity as several different rural settings are considered. This variation could be seen in this research as some groups mentioned more animals than others, but the strength of the research was measured by the

inductive content analysis that showed similar results for all groups and the results were also supported by international findings.

Teaching, studying and learning in outdoor education is a social and interactive situation. The pupils affect each other and the teacher and the researcher affect the pupils and vice versa. A pupil with a negative attitude and loud behavior might demolish the learning situation for other pupils and affect the researcher's observation and attentiveness for her task. Class bullying is also a fact that affects learning, but is not easily recognized by the researcher. Therefore, especially negative and neutral answers are interpreted with care, as there might be unrecognized factors that have affected negatively on the pupils learning.

The method for measuring the pupils' general opinion has been interpreted with care, as it is only a three-step Likert-scale. A five-step scale might have given an answer that would have fitted the negative comments better. Another aspect that has to be kept in mind is that the questions used to measure expectations and experiences are not analogous, but they have been formed to measure pupils' expectations and experience of their learning in rural setting.

## Conclusion

In conclusion, these results reveal the positive educational value of outdoor education in rural settings and the linkage between affective and cognitive values. Both the pupils and the teachers brought up values that support teaching, studying, and learning. Overall, similar tendencies in experiences and an increase in general positive attitude towards outdoor education in rural settings can be identified among the urban and the rural pupils. Especially learning was brought up as an important quality, as did a better learning environment. Differences between the urban and the rural pupils can be explained by cultural and geographical background and preparatory activities that the pupils have or have not participated in. From an educational aspect, Eco Learn can be regarded as a successful model for further use in the school world.

Teaching, studying and learning processes are personal experiences what involve emotions, cultural and geographical background. Pupils multidimensional and various backgrounds need to be taken into account when planning outdoor education in rural settings, but more important is preparing the pupils for learning by appropriate activities. Especially, when developing knowledge level of pupils, teachers should emphasize how important role the farms have concerning everyday nutrition. It seems that students themselves pay attention more to enjoyment than to the facts of food. Personal and affective values do not seem to be the most important value when regarding teaching, studying and learning. Teaching, studying and learning in outdoor rural settings can from this aspect be seen to have cognitive values that are linked to affective values. The interconnection between emotions and learning has not been widely studied and needs further investigation to be clarified.

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## Kırsalda okul kampı eko öğrenme: Kırsalda açık alan eğitimi

Kırsalda ve tarımsal alanda açık alan eğitimi, öğretme kadar farklı okul kursları çalışması ve öğrenmesi için çok sayıda fırsatlar sunar. Bu çalışma bir eğitsel kırsal alan kamp okulunun-Eko Öğrenme- geliştirilmesini araştırmayı ve öğrencilerin beklentilerini, öğretmenlerin geliştirilen programı uygulama tecrübelerini keşfetmeyi amaçlar. Programların geliştirilmesi öğretmenler, çiftçiler ve öğrencileri de içeren farklı kesimlerim temsilcilerinin katılımını içeren bir süreçti. Birbirini desteklemek amacıyla nitel ve nicel metotlar karma biçimde kullanılmıştır. Tümevarımsal içerik analizleri yapılarak analizler gerçekleştirilmiştir. Katılımdan sonra öğrenciler arasında kırsal alanda çalışma ve öğrenmeye ilişkin olarak genel olumlu bir tutum artışı bulunmuştur. Şehirden gelen öğrenciler daha romantik kırsal değerler ve kırsal öğrenciler öğrenme süreçleri ve ürünleri umdular. Kırsal bir çevrede hazırlık etkinlikleri ile birleştirilmiş açık alan eğitimi hem öğrencilerin (yaklaşık %80) hem de öğretmenlerin (yaklaşık %70) öğrenme tecrübelerini olumlu etkilemiş, sıradan sınıf ortamına göre daha iyi bir öğrenme ortamı olarak değerlendirilmiştir. Genel olarak sonuçlar kırsal alanda açık alan eğitiminin olumlu eğitsel değerini ve duyuşsal ve bilişsel değerler arasında bir bağlantıyı göstermektedir. Finli öğretmen eğitimi bu türden eğitimi daha etkin biçimde öğretmenler için hazırlanan müfredata almak hususunda teşvik etmektedir.

**Anahtar kelimeler:** kırsal, çevre eğitimi, sürüdürülebilir gelişme için eğitim, ampirik eğitim, çiftlik ziyareti, karma yöntem yaklaşımı