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Report from the pilot project Lund Calling:
a RCE-Skåne project in the Municipality of Lund

Learning in global settings for sustainable development: local challenges

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Preface

We would like to thank all participants within the pilot project *Lund Calling*. Financial support was provided by the Environmental Fund of Region Skåne and the Department of Education at the Municipality of Lund and Lund University.

The pilot project *Lund Calling* was recognised as:

- an European Union project under the Swedish Chairmanship 2009.
- and given the RCE-Skåne status through the United Nations University, Japan.
RCE is an abbreviation for Regional Centre of Expertise on Education for Sustainable Development.

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Introduction

The pilot project *Lund Calling* is a step for initiating the process of learning about sustainability issues in global–local settings through the implementation of the Young Masters Programme (YMP). *Lund Calling* was originally started by the Municipality of Lund to promote education for sustainable development (ESD), giving pupils from grade 8 up to the completion of upper secondary level the opportunity to study the YMP within the framework of their regular studies. This was to be accomplished by the construction of a local course, considered to be “a raw model” for all schools in Lund. A number of schools were specifically selected by the Department of Education in the Municipality of Lund to participate in the pilot project *Lund Calling*.

Alongside with the educational pilot project, a research project was also to be conducted. The aim of the research project was to analyse and describe pupils’ and teachers’ experiences of the pilot project. Later, interviews with headmasters were also included. The purpose of this empirical investigation is, in other words, not to evaluate or assess the effectiveness of the initial attempts to implement the YMP at schools in the Municipality of Lund, but rather to contribute to the further development of the implementation processes, by capturing some of the experiences, voices and engagement of the many stakeholders and participants. Preliminary findings were presented during a seminar (2008) at the International Institute for Industrial Environmental Economics (IIIEE) at Lund University, which was addressed to participants from schools in Lund. Findings were also presented at the international conference initiated by the Regional Centre of Expertise on education for sustainable development in Skåne (RCE-Skåne): *EU as Global Actor – The pilot project Lund Calling 2009. European Conference on Education for Sustainable Development: Community based learning – Bringing the World into the classroom* (Nordén & Anderberg, 2009). For more information, visit the *Lund Calling* web site at: <http://www.lucus.lu.se/lundcalling/>

The Young Masters Programme has developed into an internationally acclaimed and well-tested model, for distance education with multicultural and interactive participation, dealing with sustainability issues. The YMP is offered by the International Institute for Industrial Environmental Economics at Lund University. For more information, visit the IIIEE web site at: <http://www.iiiee.lu.se/site.nsf/AllDocuments/3FF88126AF2B70EDC1256F6B00489555>

In this first section of the report, we outline the background of the study. In the second section, the design of the empirical investigation is described, while in the last section, the results of the empirical investigation will be discussed. Some conclusions are presented, and further steps in the implementation process are suggested.

Background

The aim of this project is formulated against the background of the complexity that is represented in global learning for sustainable development (GLSD). Sustainable development (SD) is of global interest and global cooperation is needed, while efforts aiming towards sustainability must also be understood in their local context. The conference document issuing from the 1992 UN Rio de Janeiro Conference described the importance of a global partnership, in order to achieve SD. However, the question of how an extended classroom can be created in practice – that is, the integration of the local and global classroom, with online learning and teaching regarding SD - has been very little investigated from an empirical standpoint (Anderberg, Nordén & Hansson, 2009). Institutional aspects of global cooperation in education have been considered, and the role of ICT-mediated learning has been recognised, whereas conceptualisation problems arising in knowledge formation in global settings have been neglected. Learning for sustainability, which is known as a complex field open to different interpretations, provides fundamentally new ways of thinking and acting (Wals & Jickling, 2002), as well as being a priority of global interest (Rost, 2004). There is therefore an urgent need to go from the dominance of the rhetoric level concerning the goals we wish to achieve, to levels of concrete activities needed in the practical implementation.

From the learner's perspective, how knowledge is formed, and how concepts are used to develop understanding of sustainability issues, remains an open and fundamental question in global learning for SD. The very open and complex character of the relation that exists between the specific learner's perspective and skills - coming from different regions, countries and cultures - on the one hand, and the demand for shared understanding of complex problems and knowledge, on the other, is one of the central issues in learning for SD (Scott & Gough, 2004; Moore, 2005). A renewal of environmental educational systems is needed, in order to make these more forward-

looking. Additionally, secondary and upper secondary school pupils, aged 13-19, are as a target group particularly difficult to reach and engage in the work towards sustainability. These problems were emphasized already at the Tblisi meeting 1977 (UNESCO, 1977; Nordén, 2008).

The specific form of knowledge formation for SD in global–local settings is to reach a deep and holistic understanding of environmental challenges, in another context than the learner’s knowledge was previously grounded in. The constitution of this knowledge formation depends above all on how the relation to earlier knowledge of the learner is created. In other words, it is not just a question of learning something new, but of working actively with the integration of knowledge from various areas. This increases the possibility that complexities could become clearer in our awareness of the world around us (Pierce, 1934; Bateson, 1972; Hansson, 2004). Learning for SD further involves that the learners’ experiences are confronted with challenges, on both local and global levels, formulations expressed in a foreign language, abstract inter- and transdisciplinary scientific concepts, as well as de-contextualised knowledge formation. Finally, pedagogical aspects in the process of implementation of the ESD course in *Lund Calling*, and how it relates to other courses at these schools, also need to be emphasized. This process could be seen as an interplay between educational change and educational development (Booth & Anderberg, 2005).

Education for sustainable development (ESD)

In an extensive review of the area, Rickinson (2001) focuses the value of critically analysing and making sense of research in environmental education (EE). Placing this research in a larger social and historical context is important, within a growing and complex field, with varying review processes developing increasingly. Research about EE started around 30 years ago and has gone through different phases. The main focus has shifted from ‘environmental’ knowledge, to knowledge for ‘sustainable development’ (UNESCO, 2003), which means that ESD must approach sustainability issues in a transdisciplinary way. Additionally, forming values and taking action both become an essential basis for knowledge formation. These objectives are related to knowledge as the ability to act, rather than knowledge as a ‘possession’ (Hansson, 2000; 2004). Pupils shall above all learn to find and use knowledge, solve complex problems together with others, formulate independent standpoints, co-create sustainable solutions, communicate these, and network in learning communities. When aiming to change life conditions towards sustainability, young people experience that the acquisition and development of various aspects

of action competence for sustainable development – including global responsibility – builds on their individual initiative as well as structural actions (Almers, 2009). Furthermore, the process of learning is characterised by continuous change (Thomas, 1999). Difficult overlapping transsectorial and transdisciplinary (Wals, 2009) collaboration is needed. Due to increasing globalisation and urbanisation, the socio-cultural, political and financial sectors tend to become incorporated, and the cultural integrity of communities is jeopardised locally.

Rauch and Steiner (2006) have studied how the concepts ‘EE’, ‘ESD’, ‘development education’, ‘global learning’ and ‘peace education’ have been handled in teaching practices in Austria. SD is in this context primarily seen as a regulatory idea. Such ideas provide heuristic structures for reflection, as well as supplying a direction for research on teaching and learning processes. This means that the vision and the aim of SD need to be constantly renegotiated by participants in every concrete situation. Consequently, educational development and educational research need also to stress individual and collective self-development and self-determination.

Irving, Yeates and Young (2005) maintain that the global perspective enriches and challenges conventional teaching and learning methods, showing how this perspective shapes innovative teaching and learning experiences. Their study deals with higher education, and focuses the question of how a global perspective in social policy is fostered in the curriculum. This kind of global perspective has the potential to promote awareness, knowledge formation and deep understanding of different topics relating to SD. Their study shows the emergence of an increased awareness in the academic community, concerning the need for a global perspective, and provides details on how global social policy can be established as a subject area in social policy. A global perspective in the teaching stimulated students to widen their thinking, and go beyond their own national context, by being more critical and imaginative when considering how classical questions and answers are developed in global contexts. Also, a global perspective in the curriculum provides learners with opportunities to relate their personal experience to a wider context. Irving, Yeates and Young point out that students often have a more global experience today, due to travelling and international contacts. In the article, they suggest a process-driven approach of knowledge construction, rather than a simple additive expansion of content. In this perspective, the development of the competencies of the learner is of prime interest and this, in turn, demands a more principle-led and capabilities-driven curriculum change.

Similar recommendations are formulated by Rost (2004), who wants to come away from the purely rhetoric level and instead relate to a more practical level. ESD must guarantee that people

in the future are more able to deal with and handle globalisation processes than they are today. He suggests a framework that gives the learners possibilities to handle complex development issues, and as a consequence behave in more sustainable ways. We see that this functionalist educational idea takes its main point of departure in the basic principles of Agenda 21 (1993), where education has the objective of fulfilling a particular set of tasks, to ensure the future of the planet.

Reid & Petocz (2006) have identified the problem that very little sharing of a common language about SD takes place among teachers and learners. A common understanding of the issues involved in teaching is also missing, leading to a lack of curriculum integration of SD. They conclude that the teachers themselves need to understand these issues better, both globally and with respect to their particular discipline. They point out that limiting conceptions of SD often give rise to limited approaches to teaching that subject, whilst holistic (or expansive) conceptions tend to broaden the teaching approach. A holistic ESD programme conveys knowledge, issues, skills, perceptions, and values, associated with searching for and progressing towards SD - strengthening learning for sustainability in a transdisciplinary manner.

The global–local context

Anderberg, Nordén & Hansson (2009) have discussed the interest shown for the notion of ‘global learning’ during the past decades, in particular during the UN decade of education for sustainable development (DESD) 2005-2014. The interest in global learning with its critical approach, committed to self-determined learning in a global context, has been especially keen in Germany and Austria.

While ESD focuses on finding solutions to sustainability challenges, ‘global education’ (GE) strengthens the potential for learning about complexities through interaction, globally and locally. Finally, the research field ‘global learning for sustainable development’ (GLSD) emerges through transdisciplinary reflection on how these two approaches can be combined most fruitfully.

GLSD includes the objective of resolving global problems, involving critical thinking, skills and values, as well as socio-cultural awareness. Determining the characteristics that could guide teaching strategies, inform curriculum design, and serve as a reference for teachers, administrators and policy makers in charge of the practical implementation of GLSD, are all questions which need further research and debate. Substantial empirical research is needed on learning in global settings, in particular when dealing with complexity in the context of a world society, focusing competencies both as means and outcome. Innovative

educational approaches that facilitate real multi-disciplinary and multi-cultural understanding in global settings need to be investigated, and competence-driven ways to integrate SD into curricula must be prioritised. (Anderberg, Nordén & Hansson, 2009, p. 375)

These global challenges have yet to be taken on by many universities and higher education institutions (Marsella, 2007), through contemporary approaches, and by virtue of relevant knowledge, as well as valid methods. This is to be compared to the findings in earlier empirical research carried out by Nordén (2008), where collaborative ICT-mediated environments are seen as supporting the development of a global learning perspective, when a global perspective towards ESD is adopted.

If we are interested in seeking empirical data on issues of implementation, simply referring to the rich production of policy documents from political institutions and governmental organisations is not acceptable as a basis for this type of research. Instead, we need to devote attention to the actual learning processes that take place in GLSD settings. Empirical studies undertaken on learning and teaching in global settings, in the project *Learning in the ICT-Extended University* (LiEU), (Booth et al. 2007), found that meeting in global settings seems to catalyse both pupils' and teachers' commitment to sustainability. The results indicate that GLSD is strengthened by the global knowledge building tools, in particular the Preventive Environmental Strategies (PES), that were made available in a global learning setting, involving global and multicultural meetings. Thinking in terms of PES provides knowledge instruments to the pupils, who learn to focus on proactive ways of avoiding, preventing or reducing the negative impact of certain types of behaviour, on different levels. By global acquaintance through learning activities, the pupils gain understanding of how to apply PES. Meeting in online discussions provided pupils with strategies and opportunities to work in a deductive way, not only inductive. Nothing was simply right or wrong (Hansson & Nordén, 2007). The pupils learnt to be more critical, and modified their understanding, by collaboratively engaging in online discussion. Pupils also became aware of the various aspects of this collaboration during their learning in the globally extended classroom. The learning process developed from studying and reading, to asking, searching, reflecting, and engaging in empowering dialogues. The pupils thereby developed potentials for complex learning and thought processes. They found it useful and rewarding to transform knowledge and be involved in an extended global learning space (Nordén & Hansson, 2006).

For optimal support of the upper secondary school pupils during the YMP online, earlier research has shown that it is preferable to have teachers of different subjects at each school working across the disciplines as mentors, to facilitate each group of pupils (Nordén, 2005). The YMP seems to be of great importance to the pupils as individuals, and as members of both the local and the global society. In the YMP, teenagers explore a learning environment with new ICT-mediated ways of communication, including global interaction with powerful ideas and descriptions relating to sustainability issues. They become acquainted with a transdisciplinary approach, focusing social, economic, or ecological aspects, as well as ethical dimensions (Nordén, 2005). However, one problem is that the constitution of verbally expressed meaning in the global context is multifaceted and multilingual. The results show that pupils hovered between two extremes. Although they were using a common 'global' language, it was clear that underlying concepts were not held in common. Some words in English had no equivalents in another language used. The pupils had to find and argue for an explanation for the special word. Different understandings of what are apparently similar concepts therefore have to become the object of explicit reflection. The ways to express knowledge also differ. Language used in the discussions could be more or less scientific, or more of an everyday language. These issues of language and knowledge formation were a challenge with respect to possibilities for deep and holistic learning.

The process of implementation

A strong commitment is needed, to move from the rhetoric level to the level of action. The pilot project *Lund Calling* is an example of progressing to more of an action level, by initiating the YMP in schools, and working with some of the practical issues of teaching and learning that ensue, as well as the organisational question of educational development. Hansson and Nordén (2007) highlighted that the significance of the YMP is twofold. Firstly, it provides a better understanding of how learning processes can be designed and implemented in a more or less successful way as outreach at the university. Secondly, the YMP outreach activity, aimed at individuals as networked members of both the local and the global society, is probably a way to enhance sustainability globally. Obviously, this type of initiative will also involve a certain amount of difficulties. Challenges relate to the integration of SD into the curricula, as well as to teaching in a global setting. The needed transdisciplinary manner of thinking and acting does not automatically emerge, and the intended 'holistic' framework is hard to design, especially in a global perspective.

Implementation processes for progressing towards GLSD locally constitute a recognised challenge for most teachers (Nordén, 2008). Problems identified by Reid and Petocz (2006) in formalising teaching and learning arise, due to the absence of a shared understanding, or a common language among teachers.

Wals (2009) studied the implementation phase of the decade of education for sustainable development (DESD), in the period 2005-2009. The study indicates that there are intrinsic limitations to carrying out an assessment on a global scale. Wals therefore calls for more equitable and locally engaging forms of monitoring, and suggests interactive dialogues. Through reviews with locally determined indicators, appropriate languages, and multiple forms of literacy, steps towards evaluation systems that better fit the foundations of sustainability could be identified. In the research conducted by Hansson and Nordén (2007), synergies with the implementation initiative are recognised, when global learning for sustainable development (GLSD) is given the floor. Marsella (2007) points out that GL demands the development of a philosophy of education, promoting multidisciplinary and multicultural content and learning processes, with particular interest paid to the progression of curricula, and adjusted to the characteristics of the pupils.

A process-driven approach, with focus on how learning takes place, is suggested by Irving, Yeates and Young (2005). Stevenson (2007) believes that the changed conditions and culture for teaching and learning have resulted in focus on preparing pupils for their individual life and rights, and at the same time such changes reduce their capacity for cooperation. Stevenson maintains that pupils ought to be fostered to become responsible citizens, with the capacity to collaborate towards global sustainability. More interaction in school activities is needed to achieve a sufficient level of critical thinking, problem-solving and similar essential skills. In view of achieving this kind of goals, Rost (2004) focuses on the practical implementation issues of GLSD, to enhance the ability to handle and deal with globalisation processes.

Considering the global and institutional influences on education, Tatto (2007) highlights how the multifaceted globalisation that drives changes within many sectors in society, also affects local teaching and implementation processes, to the extent that these are embedded in a global context. Culturally, increasing communication processes challenge the traditions; politically, these trends make ideas like pluralism more acceptable, while in education - in particular up to secondary

school - decentralisation trends can be observed. Also, more recognition is given to knowledge fields connected to the market, in pedagogies orienting towards problem-solving.

Teacher-related reforms usually emerge from the administrative level, via regional and global forces. Such reforms are influenced by societies' views on teachers' opportunities to learn and teach a variety of knowledge and values that are considered important (for example the YMP during the DESD and in the RCE Skåne). Teachers are then expected to impart these, as well as actually implementing them in the classroom (Tatto, 2007). For example, the results of studies such as TIMSS and PISA (the OECD programme for international pupil assessment) will validate certain qualities of teaching and learning, and thereby drive certain changes, while obstructing others.

In many cases these reports reveal that innovations in teacher preparation - often introduced as a consequence of curriculum reform - have rarely been subjected to rigorous scrutiny in their own right, and that effects of these changes are expected to manifest in pupils' learning rather than more immediately in teachers' knowledge and practice. These reports are having the effect of validating and legitimizing 'global indicators of quality teaching and learning'. (Tatto, 2007, p. 10)

Formal school is in other words profoundly affected by the globalisation trends. Most importantly, with respect to opportunities for educational development, Tatto (2007) points out that adopting global indicators of quality reduces the teachers' autonomy, control and independence over their work. This is why globalisation can in fact become an obstacle to introducing more holistic perspectives in the classroom. The use of pedagogies oriented towards problem-solving is thereby limited in practice, despite the goals stated at a policy level.

Perspectives on learning

The socio-cultural (Säljö, 2000), phenomenographic (Marton and Booth 2000) and cognitive (Vosniadou, 1994) perspectives on learning represent three distinct perspectives. The *cognitive perspective* uses the notion of 'concepts' and 'systems of concepts' as a foundation for knowledge building. The phenomenographic perspective focuses variations of conceptions (ways of experiencing) and emphasizes the learners' experiences of a concrete learning situation. How the relation between the individual and the world is constituted and experienced lays the ground for knowledge formation, according to the phenomenographic perspective. In the *socio-cultural*

perspective, language use and discourses are in focus, since patterns of communication and language form a foundation for knowledge formation.

Comparing these three perspectives, the phenomenographic perspective is best suited for the type of research that will be conducted here, in connection with the study of learning and conceptualisation within the YMP. This is because the focus is on the variations, opening up for the different ways of experiencing a particular learning situation. The strength of the phenomenographic approach is that it lingers by the object, and attempts to avoid hasty assumptions. Rather than imposing a pre-established set of categorisation, categories of analysis are grounded in the empirical material. Important issues are carefully investigated, including “*what is the learning environment?*” and “*what does the learner need to learn?*” A further advantage is that, with the focus on the relation between the learner and the context – or even a wider context – the understanding is expressed in a first order perspective, the learner’s perspective.

Hart & Nolan (1999) point out that it is necessary to strive for more in-depth qualitative analyses, since a collaborative spirit attempting to improve the quality of EE research has been recognised through their review. Future research in EE must focus on the support to teachers, by creating structures and ethos that encourage the teachers in their quest to examine their beliefs, and in their understanding of how to support new practices consistent with these new beliefs.

A number of educational strategies have put emphasis on a deep involvement of the learner in the issues at stake, skills that are relevant to the discussion of controversial issues, and the inclusion of diverging interests (Wals, 2006).

Focusing on sustainability provides a wonderful opportunity for accessing higher learning (epistemic development) and new ways of knowing (the paradigmatic challenge) precisely because the concept is (a) so slippery and open to different interpretations, and (b) so complex (involving ethical, moral, aesthetic and spiritual issues as well as the more conventional technical, economic, social and cultural ones). (p. 50)

Wals further highlights that many serious attempts to integrate sustainability into education bring teachers into whole new pedagogical worlds – working as process anchors for initiating teaching and learning towards sustainability.

Design

The pilot project *Lund Calling* aimed at functioning as a first step of implementation of the YMP in schools of the Municipality of Lund. In the course of this implementation, however, the original planning was changed and the collection of data for this research project had to be modified due to these new circumstances. Compared to the original research plan, a number of adaptations were made (see chronology presented in Table 1 and 2 below). In this section, we shall first outline the idea of the YMP. In the next part, we shall also present how the changes that occurred modified the original research plan concerning the data collection.

The YMP

The International Institute for Industrial Environmental Economics (IIIEE), at Lund University, has worked with the Young Masters Programme since the start, in 1999. The YMP is a global teaching programme of important notions in sustainable development, addressing young pupils, aged between 13 and 19 years old. Since 1999, the programme has reached out to some 10,000 pupils in more than 100 countries. For more information, visit the YMP web sites:

<http://www.iiiee-ymp.org/> and http://www.iiiee.lu.se/geyc/geyc_raport/index.htm or <http://www.iiiee-ymp.org/drupal/index.php?q=node/332> as well as http://www.ll.lu.se/fileadmin/user_upload/Laerande_Lund/LLrep20072eng.pdf respectively.

The online course is supervised by the IIIEE. It is available for all schools worldwide, and is distributed free of charge. The programme facilitates the development of concrete sustainability skills and provides easy-to-understand information on several of the major sustainability challenges facing humanity today. The YMP has a true global outreach – pupils from 113 countries have participated in the programme. The YMP teacher network consists of over 1,500 active teachers from all over the world. Within the framework of the YMP, a convention has taken place every second year, the Global Environmental Youth Convention (GEYC), allowing young people and teachers to meet face-to-face, to exchange experiences, establish contacts and come to know one another.

The YMP online course has the following structure. Parts 1 and 2 together form a 18-week theoretical distance training course, with problem-based exercises, and discussions in a virtual course room. The first part contains elements of basic environmental education *Sustainability - why?*, while the second part *Sustainability - how?* concerns preventive environmental strategies (PES), in an overarching perspective of global sustainable development. This includes strategies

for poverty reduction and developing skills required to implement this environmental education. Part 3 consists of a practical project, carried out in the participants' local environment. This is presented to the supervisor and/or in connection with a possible participation in a subsequent convention, which constitutes the fourth and final part. Conventions offer pupils the opportunity to present their project work, while opening to an intercultural dialogue, in which knowledge and experiences are exchanged.

Ahead of an upcoming GEYC, which was planned to take place in China in 2009, altogether four YMP batches of applying pupil teams were admitted to the YMP online courses during 2007-2009. A batch could consist of 500-2000 pupils, or more. Some Swedish participants from these different batches were interviewed in the present study.

Lund Calling facilitated a pilot effort in a number of schools, to use YMP as an integrated tool in teaching ESD, in Swedish compulsory schools (years 8-9), and upper secondary schools. The pilot project *Lund Calling* initiated the first step in the implementation phase of the YMP in the Municipality of Lund. The YMP was going to be progressively offered to all teachers in the Municipality of Lund at these levels. The first step involved trying out the course in certain selected schools, and with a limited number of pupils who had been chosen by their teachers to participate. This first step was intended to run in the spring semester 2008. The next step in the pilot project involved using results and recommendations from the research project, to make necessary adjustments in the implementation. The period of adjustment was anticipated to run in the late autumn semester 2008. Finally, the YMP was to be offered to all pupils in the Municipality of Lund from year 8 upwards, starting in the early spring semester 2009. The pilot project *Lund Calling* finished spring 2009, which is when the main project *Lund Calling* started. *Lund Calling* is seen as a long-term cooperation between the IIIIEE and the Municipality of Lund, and is therefore expected to develop further.

Alongside with launching the YMP in certain schools of the municipality, the pilot project *Lund Calling* involved a research study, to provide necessary input for the adjustments of the format and educational development that would be needed in this connection. A number of changes were affected concerning the implementation of the YMP during the whole pilot project, and we therefore had to adapt the data collection to these changes. Fewer schools and a lower number of headmasters, teachers and pupils than originally expected by the organisers in the Municipality of

Lund participate. As a consequence, the original research project plan of a longitudinal interview survey with the pupils was not fully completed. Also, in the original plan, the intention was not to let school leaders participate in the study, but due to the multiple changes in the organisational characteristics that influenced the initiation of the YMP in the pilot project, we chose to also seek out a picture of the school leaders' views on the process. However, these modifications do not affect the relevance of results for the further development of the course, but rather widen the perspectives included.

In the initial step in upper secondary schools in Lund, it was decided to focus only on the development of a new curriculum and the criteria for marks and the evaluation of upcoming ESD programmes, in collaboration with the headmasters and teachers. In this phase, the school leaders in upper secondary schools felt it was too early to participate with pupils directly in the ongoing YMP online courses 2008-2009. Retrospective interviews were therefore made with teachers and upper secondary pupils who had participated in the YMP the preceding year.

Data collection

Data was collected from spring 2008 to spring 2009. Pupils (13-19 years old), teachers and headmasters from a total of six different schools in the Municipality of Lund were interviewed. The number of informants were 15 (n=15). The number of interviews carried out were 20 (n=20) and interviews have been transcribed in full. Semi-structured questions were developed about the experience of participating in YMP within the pilot project *Lund Calling* (Appendixes 1-8). Interviews were carried out in the YMP/GEYC 2009: Batch 3 after Part 1 (with drop-outs), and Batch 4 with a newly-started group of compulsory school pupils (who were at the start and in the middle of the YPM online course, respectively). From Batch 2 - of the YMP/GEYC 2009 - 2 teachers and 4 pupils from upper secondary schools, 6 months after their participation, as well as 2 headmasters (one from a compulsory school and the other in charge of an upper secondary school) were interviewed retrospectively, during the autumn semester 2008, to share their experiences and give recommendations for the future.

The description (see Tables 1 and 2) of how data is collected reflects how the pilot project *Lund Calling* was realised in schools of the municipality.

Table 1. Overview of data collected during 2008 – 2009

Interviews conducted in schools at the Municipality of Lund				
Informants in	Start of the YMP Interviews	Mid-YMP Interviews	Drop-out YMP Interviews	Retrospective YMP Interviews
Years 8-9:				
Pupils	4	2	2	-
Teachers	3	1	-	-
Headmaster	-	1	-	-
Years 10-12:				
Pupils	-	-	-	4
Teachers	-	-	-	2
Headmaster	-	1	-	-

A total of six schools in the Municipality of Lund participated, out of which three are compulsory schools and three upper secondary schools. 12 interviews were conducted with 8 pupils. Four pupils were in compulsory school. Four of the planned "longitudinal" interviews – out of which two subsequently defected – were made with pupils from Batch 3. This meant that four pupils were interviewed twice, first in Part 1, and then also in connection with the start of Part 2 (see interview guide Appendices 1 and 7), after which two of these four pupils dropped out (see interview guide, Appendix 2). Two pupils who had been interviewed in connection with the start of Part 1 were included in Batch 4. Four of the pupils attended upper secondary school, where all the interviews took place after the end of the YMP (i.e. these pupils made a retrospective reflection). In other words, the four upper secondary school pupils were interviewed retrospectively after they had completed Parts 1-2 and Part 3 of the YMP. Pupils from Batch 2 had been admitted to the Convention in Beijing, which was postponed until 2009, but later cancelled. These four pupils of the interviewed upper secondary school pupils had time to finish their upper secondary school studies in the meantime, since they graduated spring semester 2008 (see interview guide, Appendix 3). Interviews were also conducted with five teachers, including three from the compulsory school, where one was a 'drop-out teacher' (see interview guide in Appendices 4 and 8). Two teachers came from two different upper secondary schools

and were interviewed retrospectively (see interview guide in Appendix 5). In addition, two school leaders were interviewed - one working at a compulsory school and one working at an upper secondary school (see interview guide in Appendix 6).

Table 2. Overview of the data collection during 2008 – 2009 month by month

The following interviews were conducted in 2008 for the data collection:	
June:	From Batch 3 of the YMP / GEYC 2009 three teachers and two pupils in compulsory schools were interviewed after the start of Part 1.
September:	Scheduled interviews had to be cancelled when the number of school leaders and teachers in compulsory school did not have the possibility to start groups of pupils for participation in Batch 4 of the YMP / GEYC 2009. Upper secondary school leaders and teachers decided to focus on curriculum development and preparation of rating criteria (Appendix 9) for the YMP-designed courses at upper secondary school (possibly 2009-2010).
October:	From Batch 2 of the YMP / GEYC 2009 two secondary teachers were interviewed retrospectively. Also two school leaders - one from the compulsory school, and one from upper secondary school - were interviewed without at that time having any teachers or pupils involved in the YMP.
November:	From Batch 2 of the YMP / GEYC 2009 four upper secondary school pupils were interviewed retrospectively.
December:	From Batch 3 of the YMP / GEYC 2009 two pupils in compulsory schools were interviewed, after dropping out after Part 1. From Batch 4 of the YMP / GEYC 2009 two new pupils in compulsory schools were interviewed after the start of Part 1.
The following interviews were conducted in 2009 for additional data collection:	
March:	Follow-up interviews ahead of Part 2 with two compulsory school pupils from Batch 4.
April:	A follow-up interview was done with one compulsory school teacher from Batch 3-4. No more interviews with upper secondary schoolteachers were made.

Results

The aim of the analysis of the data was not to capture the totality of experiences or all the processes, but rather to capture variations in educationally critical ways, concerning how the pilot project *Lund Calling* was carried out. When treating the data material, critical qualitative differences and similarities were focused. These were then grouped into four ‘aspects’, representing variations in the learning experienced by the participants.

- 1) Promoting local commitment in global settings
- 2) Global – local interaction
- 3) Knowing about teaching and global learning for SD in a global–local context
- 4) The ability to act globally

The description of each aspect is followed by quotations from the interviews with pupils, teachers and headmasters, commented by the authors.

1. Promoting local commitment in global settings

This aspect describes how the conditions, the process and the results of the initiation of the pilot project *Lund Calling* were experienced by the participants. Seen in conjunction, these experiences together show a genuine interest in the pilot project *Lund Calling*, and illustrate how the instruments used in the YMP related to the conditions and the organisation among participating schools. By participating actively in the implementation process, the roles played by the various participants were progressively transformed in the course of the process. A need for strong commitment and relevant skills among staff members was apparent. The existing conditions for this type of educational development are described below. These descriptions give a picture of the state of art, while the processes experienced by participants indicate how the progress of the initiation of the pilot project *Lund Calling* was promoted.

Until the present moment and under the ruling circumstances, many of the upper secondary schools in the pilot project *Lund Calling* had difficulties adopting the ESD concept. Findings concerning the current situation at schools in the Municipality of Lund indicate that transdisciplinary integration of subjects is problematic. One of the main reasons appears to be

that both teachers and pupils strongly relate their teaching and learning activities to realising the learning objectives and marking criteria formulated in course syllabi. These documents are relatively detailed, as well as having a mandatory character. The need to manage time effectively to fulfil goals stipulated in these documents therefore strongly limits the scope for action, and has a strong impact on both motivation and priorities. Subject descriptions and learning goals defined in the Swedish National Curriculum, the course and programme syllabi for upper secondary schools, or similar steering documents, therefore inhibited the start of the process of change to some extent. Another issue that was stressed in the interviews was the importance of collaboration between teachers and pupils, and in particular how to find ways in common, allowing pupils to carry out a real and motivating project work (Part 3 of the YMP), within the framework of their regular school activities. This was the real challenge, according to headmasters and teachers, and that is the main problem. It is not about raising awareness among pupils and teachers about the significance of sustainable development in a global context. Many are already very conscious about the importance of learning and teaching about sustainability issues.

There are loads of teachers and pupils who are aware of the importance of sustainable development. That's not the problem. The problem is: how do we work together concerning these issues within the frame of the school? [headmaster]

It is obvious to several of the upper secondary school teachers that the mandatory course syllabi of various subjects do not fit into thinking and planning for transdisciplinary integration, which more easily can be designed and carried out at compulsory schools. It is therefore harder to fulfil the expectations of initiating ESD at upper secondary schools, even if the teachers themselves are motivated, since the curriculum, marks and time schedule not are adapted to this type of initiative.

.../ don't fit into the syllabi for the various subjects – which have to be followed. Compared to compulsory school, it is not easy to integrate it in a transdisciplinary manner in upper secondary schools either. [teacher]

The motivation for pupils to participate in the pilot project Lund Calling varied, depending on how they have to allocate their time studying different subjects, to improve their prospects for a future career. Teachers emphasized that studying the YMP, which is a form of ESD, might not give the pupil higher marks. When this is the case, pupils will tend to concentrate their efforts on

subjects that give them the marks they need, and a more idealistic interest in a course or programme about sustainable development fades out and is withdrawn. The following quotation highlights that teachers in different subjects experienced that there is a process taking place, from the enthusiastic start among the pupils, to the point where they realise they may not have enough time to complete the YMP, alongside their regular studies. There are limitations – the pupils' time at school might not be sufficient for their own development or personal engagement in important fields such as ESD.

The pupils are really interested when you start. Then the different subjects they have to swot for suddenly start to compete with this thing [YMP/ESD] that sort of doesn't count. They are interested, but it doesn't count anywhere, so then this is what gets cut down. And there we see it: if it is a course where they actually get marks, like they get in other subjects, then the situation is quite different of course – then it is worth while to invest in the things they may be interested in. [teacher]

One of the headmasters says that to take part in the particular learning process initiated by the pilot project *Lund Calling* is much more than a matter of getting high marks and collecting credits for future studies. But obviously, there is a form of pressure built into the educational system, and which may be reinforced by parents' expectations, competitive friends, as well as demands on oneself as a pupil.

Learning is so much more than sort of just collecting credits in a subject. But then there is this pressure from the school system, and parents, and friends, and then yourself. [headmaster]

At Swedish schools, planning conferences are regularly offered to teachers, to meet with colleagues from different disciplines within their own school, and to process the areas of knowledge that should be of common interest. One of the headmasters also gives recognition to the fact, that although these planning conferences seem to offer a potential for inter- and transdisciplinary work, the easiest strategy for the individual teacher is often to stay within their competence field and keep to their own subject.

You sit and have planning conferences, so that all the teachers who work at the same place can plan. You have teacher teams. In other words, you are really trying to plan for it. But despite all this, in upper secondary school, all too often you fall back on your subject, on your course, in a manner that is not always the most conducive to learning. [headmaster]

Further emphasized were the issues of a pedagogical and organisational nature, which were considered to be especially decisive when participating in the pilot project *Lund Calling*. Teachers experienced that they need more freedom to act. They need the opportunity to influence and form their teaching, in cooperation with other teachers, and preferably also with pupils. Most of the teachers experienced that time is lacking for them to take command and feel a genuine empowerment. ‘Someone else’ steers and decides about how plans are to be conducted. And, it is not a question about common goals and shared experiences among teachers. It is instead an organisational challenge, they explain.

I think the problem for teachers is to have an organisation where they get enough freedom, so that they can plan their activities together with other teachers, and preferably with the pupils /.../ at the basis, the cause is often that activities are controlled by schedules, a group of subjects or teaching team, but someone else controls what comes out of the planning. It is not a matter of shared objectives and shared thoughts, but rather a matter of organisation. [headmaster]

The teachers have a big share in developing a holistic approach, for optimal teaching and learning for sustainable development in a global–local setting. Transdisciplinary learning processes are experienced as subdued or obstructed by the current system of marking, gaining credits and centrally defined subject content, in accordance with the national syllabi. But it is also felt that encouragement of competence development among teachers, especially at upper secondary school, could improve their ability to prioritise a holistic approach and manner of acting in their teaching and planning activities.

There is a need for competence among the teachers at schools to lift their gaze above their course – their subject – and see the whole /.../ on this point, compulsory school lies way ahead of upper secondary school /.../ not the competence with respect to models, and theories and facts /.../ which is terribly good. But the lack of competence is when you can’t see /.../ and understand the whole. [headmaster]

2. Global–local interaction

Groups and teams working in new constellations were observed by the participants. Also, the absence of interaction in some of the virtual classrooms was commented on. Such classrooms are here classified as being ‘silent’, and stand in contrast to other global classrooms with high-flying activity (‘active’ global classrooms).

Locally established groups smoothed the progress of true teamwork. Leadership developed

among pupils in various forms locally. Experiences of shared leadership were developed within certain groups, due to inspiring teamwork. Also, some pupils, who were used to chair meetings in other contexts, here told about how they tested taking a step aside to offer the floor to other group members, to encourage them to develop their skills in taking the lead and responsibility of the work of the team. Pupils declared that the tasks within the pilot project *Lund Calling* – inquiries carried out locally and assignments presented globally – would have been too big a challenge to manage as an individual, but with many pupils working together in a team, a multi-voiced meaningful dialogue was activated, which strengthened and motivated collaboration.

It would not have been possible to manage this on one's own, so it is good that one can cooperate /.../ and discuss so that one can include several opinions. [pupil]

Participation in the pilot project *Lund Calling* demands developing new perspectives and deepening the knowledge formation process, which teachers experience as hard for the pupils to manage, without the guidance of mentoring teachers.

... of course, they have had to do large portions of the course on their own, and when I now go in and look at their answers afterwards, I strike my forehead and exclaim 'oh my God, this is a kid from fourth or fifth grade who answered this. The English is better, but reflection has not progressed further than that. So that is why /.../ make it into a course led by a teacher. [teacher]

Furthermore, when taking part in the pilot project *Lund Calling*, teachers from different disciplines at a school need to work together, to support one another's pupils with subject-specific knowledge. If teachers were to work in teams based on a transdisciplinary approach, a more holistic picture would be available for the pupils to interact with.

Well, you can't say the teacher, you have to say the teachers, /.../ Preferably 3-4 teachers should be involved /.../ at least three kinds of teachers (natural sciences, social sciences & English) /.../ [teacher]

An instrument for interactivity was presented in the form of the YMP online course and made accessible to participants. The global YMP online course was used to confront pupils, and challenge them to take on locally the transdisciplinary questions at stake. This approach fitted well into the thematic studies carried out at the school, one of the headmasters explained. A symbiotic interaction was nurtured, and a sort of global–local equilibrium tuned in. The interaction gained a rewarding and beneficial momentum in the process, through the kind of

global-local reactions that were experienced.

There was a tool, an interactive tool, to challenge our pupils with issues that were not confined to a single subject, and which fit into the theme work that we were working with, together with /.../ the teacher teams.
[headmaster]

Some pupils experienced that being given the possibility of articulating an opinion of their own was rewarding, after the extended discussion within their team, as well as interaction in groups, both locally and globally within the YMP. This shows the importance of developing competences to interact both globally and locally, thereby fostering the pupils to take a greater responsibility for their knowledge formation

We were very satisfied, and we have known each other for a long time of course and sort of /.../ it was easy to work together. But then it was just in our class, and then the other classes also had their little groups, so it was not like the whole school. And I actually thought that was rather good, for us at least, because we know each other better in our class, and then you can talk and you can present your own opinion and things like that.
[pupil]

Silent global classrooms

The global classrooms were experienced partly as silent classrooms, partly as active rooms. With 'silent global classrooms' we mean that pupils did not participate in the global interaction. Different explanations were given to why the pupils did not approach the global context: pointless discussions; lacking feedback; missing guidelines, the flexible start of the YMP.

One attentive pupil experienced the discussions as pointless, and complained about the lack of variation in the learning activities online. We have interpreted that this pupil was eager to take part in the pilot project *Lund Calling*, but was looking for some steering guidelines.

Have probably missed /.../ more discussions, that is, that in some way you would have been able to, that is between countries /.../ Because in that case you had maybe been able to achieve some form of, that is, how would you put that, discussion course via the internet, so that you would have been able to talk with others, that is, discuss with others, so that you are not just sitting there, the four of us, or the three of us, or however many you happen to be, so that you get something more as well, not just internet talk, but a little more discussions with others, also that somebody would be holding a bit more of a lecture, or not quite lecture, but that somebody more concretely tells you something so, so that you aren't just reading from a sheet of paper, and then you have to answer questions, but instead it would be a bit of variation, I think that would be something good. [pupil]

In some very silent global classrooms, the pupils experienced that feedback was somehow omitted. Other pupils considered the YMP online discussions to be pointless. A couple of the pupils mentioned that the course could be designed differently and wondered if the problems they had experienced were a result of bad planning.

Though we would get loads of feedback from classmates, but that is sort of not the way it turned out /.../ it felt sort of almost a bit meaningless at times. [pupil]

Some pupils never visited the global classroom and never took part in the interaction online, but believed that the other members of the team had control over that part of the task. The attitude of these pupils was a little bit happy go lucky – being involved in solving tasks and delivering answers within their local group, but not interacting globally (i.e. reading others' contributions or checking any feedback on their group's answer in the global classroom).

I haven't really explored that aspect /.../ But I think others in the group have. [pupil]

Drop-out pupils found many of the modules in the YMP very useful, and believed that the main ESD concept and its many parts were instructive and stimulating – even though the absence of guidance and lack of feedback were a source of insecurity. Even the pupils that dropped out explained that they had appreciated a wide range of advantages with participating in the YMP.

There wasn't that much interaction actually, in fact it didn't become, didn't work that well /.../ it became very laborious, so there wasn't that much. That is probably not the way it was meant, like /.../ there were of course kind of differences between, some started a bit later and a bit earlier so, and then you get a little bit that kind of difference in pace, so that you are not quite at the same point, I suppose that's what it is. [pupil]

The flexible start of the YMP online course was not totally a success. Some pupils were early birds, doing their tasks quite quickly. These pupils advanced rapidly, finalising remaining modules and the learning activities belonging to these, without returning back to give feedback to the late new-comers. The feeling of presence suffered, because the actual visits in the global classroom did not take place synchronically. The pupils did not divide their time in the global classroom online equally over their period of participation. This limited the opportunities for online meetings and exchange, and was a source of disappointment, since asynchronous dialogues, or no dialogues at all, gave an impression that not so many participants in total were

actively participating globally.

Problems getting started there, because it was such a flexible start, and then they were the only ones who published at the beginning, in their classrooms. And then they got somehow a bit depressed and wanted to get more benefits from it. Sluggish, because no one else had started yet. [teacher]

The global interaction could also not develop fully, due to lack of communication skills and proficiency in English. Due to poor English language skills, a common ground that might have led to a deeper reflection could not be established, according to this teacher.

I suppose it is very much a question of the ability to communicate, because in a foreign language /.../ if your knowledge of the language is not good enough, there is absolutely no reflection, of course /.../ [teacher]

Communication is essential for fruitful discussions, one of the headmasters stressed. Pedagogical resources and methodology to enhance meaningful dialogues were urgently needed.

Using pedagogical resources quickly and easily /.../ is a technical issue, partly, but that is not the really important aspect, instead it is actually purely methodological and pedagogical, and in that respect, the possibility to, well actually, both to communicate in the manner that you are conversing, but also to produce and to have a receiver, naturally it is unbelievably important, of course /.../ And if you then can relate it to important issues concerning our future and in communication with people whose conditions of living are different than ours, obviously, well then it becomes this kind of 'win win win'. [headmaster]

Active global classrooms

Alongside the 'silent' global classrooms with little or no interaction, more active global classrooms were also formed. By 'active', we here mean a classroom where engaged pupils take part in a substantial way, since they felt motivated by networking activities and this opportunity to influence their learning process, taking their own initiatives. These pupils experienced the YMP instruments as valuable.

Some of the pupils described that they were strongly engaged in networking activities and that this contributed to an increased amount of exchange of experiences. They also expressed and developed deeper dialogues in some cases, on the initiative of the pupils themselves online. The teachers had also noticed that productive interaction took place.

I am incredibly impressed by them /.../ that they still can /.../ comment on the contributions of others /.../ they felt it was extremely exciting /.../ the pupils I had were out chatting with the entire world. [teacher]

Allowing scope for pupil influence is of importance when designing structures conducive to the learning processes in the YMP. Or, as expressed by one of the pupils, it is necessary to seize the initiative to get a learning dialogue.

If you want influence, you have to talk with each other, you need a dialogue of course. [pupil]

Pupils expressed a desire for increased variation in learning via the educational platform (i.e. the learning management system online), or so-called ‘global classrooms’. Through net-based learning that includes much more than only discussions and lectures online, the content was presented in a more concrete way, to increase the pupils’ insight, and enhance their understanding of SD in a global learning context. The following quotation clarifies this aspect.

It is a matter of, because it is still sort of the experience of other people, and so on, that you are learning knowledge from, and that is the way you often write books of course, by getting it addressed to yourself directly, you take it in, it makes it easier to take it in, when you hear it, like sort of words, that is, directly in words sort of, because in that way I just think it is very different, much better than usual book-teaching, because then you can’t really, sometimes it may say that A is A, but you don’t get why A should be A, but now that you are talking with people and then you sort of understand ‘aha, that is why you feel like that, that is why you think so, that is why you reason in that way about water and so on,’ so you get more of a concrete, that is, understanding, because this is what it really is. [pupil]

3. Knowing about teaching and learning for SD in a global–local context

The way towards more pupil democracy and involvement was seen as very fruitful and rewarding, when it came to studies of sustainability issues. The learning processes among pupils, as well as teachers, had a ‘meta-character’. This means that the knowledge and know-how obtained also deals with an *awareness of how the learning process developed*. These experiences have been grouped into the categories: towards pupil democracy; reflective learning, and pedagogically anchored teaching.

Towards pupil democracy

Encouraging participatory involvement in the context of ESD, where the pupils themselves

experience that they had to take responsibility and take initiative, could be seen as one of the central targets of the ESD implementation in itself.

The independence that we are allowed to work in groups on our own and sort of write and submit ourselves. [pupil]

At the same time, these expectations with respect to self-directed learning and pupils' responsibility were undermined by the lack of information, and feelings of uncertainty about what steps to take, that several pupils experienced.

It felt like sort of that we didn't really understand what you wanted us to do, or what was going to happen. It just sort of became, well, nothing really came out of it sort of. [pupil]

The teachers did not mind giving the initiative to those pupils who they already knew were capable of handling new sorts of educational challenges. To make the YMP online work smoothly within the framework of the pilot project *Lund Calling*, as well as within the regular school curriculum locally – with no extra time set aside for the teachers to carry out the YMP – some teachers selected pupils carefully and only offered those, who were considered to be more advanced, more skilled or motivated, the opportunity to take part in the programme.

Pupils who you see will be able to manage this, and maybe sort of want to get more challenges than the others have. Those are the ones I think should devote themselves to this. [teacher]

A headmaster pointed out that it is important to “do democracy” at school, not only teach or talk about it, but actually, both in formal and informal ways, make pupil influence evolve into pupil democracy processes within the school. The reasons the headmaster gave for prioritising “doing democracy” were firstly, that the school has to mirror the democratic society in which it is placed. Secondly, the concept of ESD has – especially in Sweden (SOU 2004:104) – been interpreted to mean that a grass roots perspective and democracy are necessarily underlying mandatory prerequisites for sustainable development, and for education that will drive it. The resonance of these assumptions is deeply anchored in the mind of many people, not least in Swedish schools.

It is very much a question of getting functioning pupil influence, both on an informal and on a formal basis, so that /.../ both adults and pupils don't just learn about democracy and influence, but instead work with it all the time. [headmaster]

Reflective learning

Reflecting over actions seemed to appear in relation to enhanced learning about sustainability. It was achieved through raised *awareness about how participants relate themselves* within the ESD field. An example of this is that by reading texts carefully, one pupil experienced that she developed her skills in seeing the relationship between various meanings.

I read these texts very carefully /.../ I quite remember the words and the connection between different sentences. [pupil]

Even teachers expressed that working with ESD made them reflect and wonder what they themselves could do to contribute to SD.

Well you learn more and more /.../ I learn a great deal. You think about things /.../what you can do. [teacher]

One teacher emphasized the real importance of critical thinking, and that it was vital for the learner to consider how to develop a foundation for knowledge formation, through a better understanding of the problems observed. Additionally, this teacher felt that it was essential for the pupil to learn to apply a personal view of the question of “how I – as an individual, a learner or a member in the society – actually am a part of a certain scene/reality”. The teacher stressed that the consequences of specific decisions taken and actions had to be analysed by the individual learners, since the learning process has to emanate from the person learning.

What happens on your home ground is almost more important, that you take in the information and think about: ‘Which consequences will this have for me? How do I reason here?’- in other words, that you constantly anchor reflection in yourself, to gain understanding for problems in other places. [teacher]

Extended collaboration between learners raised pupils’ competence to look for solutions, as well as the competence to act purposefully and the ability to solve upcoming issues by acting.

/.../ to be able to cooperate as much as possible. Among teachers, and teachers and pupils to attain ... more than just basic knowledge, some kind of competence for action for the future. [headmaster]

Pedagogically anchored teaching

Content as well as form offer challenges for the teachers. If the schools wish to successfully

implement the YMP in the future, or aim at conducting similar ESD concepts, *purposeful pedagogical work needs to be carried out*, one of the headmasters pointed out. The pedagogical work involved demands the courage and motivation to change. Pedagogically anchored teachers and pupils become visible, mainly because of the shared new challenges within the ESD concept that they confronted together.

Of course, it is a matter of to which extent you have the courage to work with pedagogical development, when at the same time we are getting a lot of directives stating that we are supposed to measure traditional knowledge. [headmaster]

Lack of time, feedback, and guidance or mentorship for teachers involved, are considered by the teachers to affect the quality of the learning process.

/.../ precisely that you get some supervision as a teacher. [teacher]

What is the value of coming to know the state of affairs, if you as an individual have not gained greater influence over developments in society, one pupil concluded.

All right, it is interesting to know, but it doesn't give you that much, because it doesn't make it possible to change things on that basis. [pupil]

The experiences of the impersonal way of presenting the learning processes of the YMP and a feeling of insufficient information ahead of participation in the online course, made a couple of pupils wonder whether a consciousness existed around the teaching method and the quality of the ESD.

I don't think anything has been all that great, it may have been due to our teachers also, I don't know, but it feels that you didn't really get this kind of direct concrete information about what is happening and why you are doing certain things. Instead everything is written on the internet, but it is sort of nothing that speaks directly to us as participants, but instead it was more like 'this is what you are supposed to do', but instead it was more like /.../ I don't think it was all that personal. It didn't feel sort of that you were participating, but more that they sent this information to just anybody, and then you could do whatever you wanted. It didn't feel like you were a participant in that way. [pupil]

The information concerning the mode of procedure in the YMP course was not easily available. A few pupils in upper secondary school described this as if they were left drifting at a loose end,

without supervision. While other pupils expressed that they found it particularly positive to work independently, and that they finally were given the full responsibility of their studies.

4. To act globally

The discussion in the YMP online was not like any simple chat – not just like the parish pump. Even if some pupils did not communicate that much with participants from lots of other countries, globally, it was experienced as something very different compared to the ordinary school activities carried out in other environmental education projects of an international nature.

A couple of pupils felt it was ‘magnificent’ to be in contact with opinions of people in other parts of the world, which the following quotations illustrate:

.../ It is really exciting .../ a lot of Chinese are in there so that you can talk with them yourself .../ magnificent that a great number are participating. [pupil]

It is quite fun, because you get contact with the surrounding world, and know what it is like there and their opinions. [pupil]

Enhanced knowledge formation depended on the quality of feedback – if any – pupils got from participants in other countries, and if varying levels of knowledge were present and interacting.

No time to sort of sit down with them and follow up exactly what they were supposed to do – instead they had to work independently with this, and I think they would need a bit more feedback, a bit more intensive, for it to succeed – so that they would get down sort of to that depth of knowledge that you could actually get out of it. Now it is easily that they take it a bit too simply, they don’t quite see the possibilities, and you need to see it from different perspectives, and that help is probably something they need, but sometimes you would have wished that they really had taken the time to go through this background material, so that they deepened the knowledge, and not just sort of chattered on about these things they already know. That is the danger with this, because the tasks can be solved at so many different levels, and if you are a bit lazy, you take the shortcuts of course, and then you do whatever is simplest. [teacher]

Difficulties can be expected, if teachers or mentors are not given time to guide the pupils, according to one of the headmasters. The same headmaster stressed that adequate resources of a technical nature are not always made available to the teachers. The teachers often lack the necessary tools that are commonly used in ICT-mediated exchanges of information, among parents and young people in society in general.

I think the difficulties can be that the pupils have to do quite a lot of work on their own. Since quite a lot of the material is something that you work with on your own /.../ without supervision time, achieving that level of involvement there, it's always difficult. But if you do get it, it can probably be very very good. Other difficulties are the technique /.../ tried out communities with parents and pupils, and it produced a very positive response /.../ there it is probably a matter of teachers not really having the tools needed to make use of available resources. [headmaster]

The net-based version of the YMP impressed a couple of pupils, who appreciated that the university offered them an adapted version of an advanced course, with adequate and serious education for SD. The design of the YMP was experienced as 'fancy' and a well-developed dictionary adapted to the course content made the rather advanced texts understandable.

Net-based, then it feels more like it's a bit more serious /.../ like that you learn more, someone has taken the time to make these pages available. [pupil]

Well, there were actually these explanations to the words in the texts. I think that is really great. Like you really understood the texts, and there were pictures, it was sort of fun to read. [pupil]

The great opportunity to really have global dialogues leading to deeper reflections was unfortunately rarely fully developed. Activating curiosity and questioning as part of an initial discussion should therefore be prioritised within the online course. In the worldwide contacts between the pupils, it should be possible to have a serious exchange, one teacher pointed out. Additionally, pupils missed discussions between pupils in different countries.

/.../ missed /.../ more discussions /.../ that in some way it would have been possible, between the countries. [pupil]

/.../ you have the material, but /.../that you devote time for reflection and discussion and that you really read what pupils from other countries are describing and saying /.../ 'why is it like this?' and 'how do we think?' that you really can use it for global thinking in a completely different way than the way it is now, because now you just answer from a sense of duty, you can't even be bothered to read what you have answered. [teacher]

One of the headmasters could see the realisation of such possibilities, since the YMP offered the pupils a globally extended classroom. In this global classroom, the pupils could gain new points of view and see other dimensions, virtually crossing borders outside their own country. The

opportunity given to the pupils to create and be a part of new networks for learning about sustainable development, must be rewarding, the same headmaster felt.

The YMP material is quite amazing and I also think the manner of working is good: you read and then you work, using your own local area as a point of departure, and then you have your room where you meet others, who have done the same tasks but in their own parts of the world /.../ the opportunities for our pupils are of course to create networks in other parts of the world and discuss issues that concern young people wherever you live in the world. This is a big opportunity, I feel. I think that it is an opportunity to get an idea about the concept of sustainable development, it is probably easy to stare yourself blind just looking at your own little world. [headmaster]

The other headmaster also found it important to realise that we ourselves individually are a part of development that may or may not be sustainable. By looking into ourselves to find out how to live in a sustainable way, a contribution on the way forward can be visualised. But most important is to interact and network globally as well, not least for the school staff to be trustworthy and to set a good example. The same headmaster identified challenges on different levels of the local implementation work towards sustainable development, according to the YMP concept. Time and networked learning is needed to get beyond the limitations that our own surroundings tend to place on our visions, far from any global perspectives on sustainable development.

Discussions

Implementation consists of interrelated steps involving both educational changes and educational development

There was a consensus among the participants that the pilot project *Lund Calling* is an important beginning for developing global learning for SD at the schools in the Municipality of Lund. In general, the *learning material* – consisting of learning content in the form of texts and tasks, as learning activities to support learning dialogues in global-local contexts – got a positive reception. As an ESD concept, *Lund Calling* was considered to be a good initiative by most of the participants.

Some of the problems with the changed plans in the pilot project *Lund Calling* that arose during

the implementation meant that the aim of the research project had to be adapted to this somewhat new situation. These problems were the reason for including interviews with headmasters, and devoting portions of the analysis to questions of organisation. Main problems experienced by the participants concerned that there were *no introduction courses for teachers* to give a foundation, and that the *organisational changes* that could have been performed at schools locally to facilitate the initiation of YMP should have been taken into consideration before the pilot project started.

The *engagement* for the ESD concept and acting globally varied, depending on the circumstances. Remarkably few of the participants felt that ESD is not an urgent issue that needs to be dealt with, and commitment to the pilot project *Lund Calling* was considerable. As an *extra curricular* activity to be taken on, teachers had no other option than to teach their usual courses within the pilot project. However, the challenges experienced were not as great as might have been anticipated. The course demanded a somewhat heavier *work load* and *time was a major obstacle*. *Technical problems* occurred, but were not a major obstacle. By contrast, *changes in the pedagogical process* were mentioned as a crucial factor, if an ESD programme was to be implemented successfully and in a relevant way.

A further issue that appeared in the interview material was that *teacher training was needed before new steps* could be implemented, as in the case of implementing the pilot project *Lund Calling*. The teachers did not have the competence required to conduct the YMP locally, including the scenarios of global settings. *Curriculum preparation* was initiated and chosen as a first step by the upper secondary school teachers who, instead of participating with pupils in the pilot project *Lund Calling*, decided to carry out a planning phase. These teachers wanted to draw an outline for a course syllabus to be used for the autumn semester 2009. This syllabus was adopted by the Municipality of Lund upper secondary schools on May 28, 2008 (Appendix 9). At the beginning of the autumn term 2009, all the pupils at compulsory and upper secondary levels in the Municipality of Lund could choose to take an ESD designed course within the YMP concept.

Huge engagement but varying ambitions were observed when it came to giving more time to a commitment in the YMP within the framework of the pilot project *Lund Calling*, than had been anticipated originally. Sustainability forces critical reflection concerning one's own teaching, as

well as appreciation and respect for differences. Sustainability also requires – since there are no ready-made recipes – creativity and courage and to ‘*dare to be different*’, according to Wals (2006).

Changes in teacher and pupil roles were noted. In the course of implementing the pilot project *Lund Calling*, such changes were recognised as a beginning of developing a stable educational development. We therefore see the experiences of these changes as a critical element in educational development, and as a necessary foundation, to highlight and learn from, in any process of implementing GLSD in formats similar to the project *Lund Calling*. Hart & Nolan (1999) proclaim a will to assist teachers in reconstructing the goals of education, including the personal and social consciousness, as well as the responsibility of the pupils.

The results point to a number of important steps that were taken in the implementation. Among those we will pay particular attention to is the opportunity for the pupils to develop certain skills. The pupils experienced that their communicative skills developed radically by participating in the YMP. Also, *language skills* proved to carry the pupils ahead. They developed their ability to discuss the problems and articulate their suggestions for solutions in a more precise manner. Improved language skills allowed them to exchange experiences, both within their local group, and among the pupils who they met in the global classrooms. *Networked learning* skills were developed through participation, thanks to the global setting of the locally conducted YMP. The network between different pupils at the same school led to fruitful dialogues with “new” pupils, within their own schools. These contacts and opportunities for collaboration might not have taken place without the pilot project *Lund Calling*, some pupils pointed out. However, despite the opportunities apparently offered by the course, net-based learning did not take place globally to any greater degree.

On several occasions, the pupils took the initiative to dig deeper for facts, and had the motivation to quite immediately seek for answers to questions that had arisen in connection with the learning activities carried out locally. As *self-directed learners* (Boekharts, 1997), some pupils took great *responsibility* for their learning process. In this way, they were developing skills for *problematising, theoretising and analysing*, to gain a better understanding of the complex questions. Through *team work*, evolving most naturally from their own commitment to the challenges in sustainability issues and the GLSD, the pupils grew further into their role as self-

directed learners. The development of group meetings and discussions locally was identified as local teamwork by the pupils themselves. This cooperation which took place locally was nurtured by the presence of the global classrooms and the YMP online discussions. Collaboration gives competence to look for solutions, and solve upcoming issues by acting. Those pupils who had developed these competencies were more aware of their learning, and also more active in dialoguing online, globally and locally. The need for developing such skills is therefore of central interest in any attempts to take a more sustainable step of educational development towards GLSD. Developing skills is also a main interest in education in general (Bowden, 2004; Anderberg, Håggström, & Nordquist, 2007) and this issue has been recently focused at university level through the Bologna process (The Bologna Declaration, 2000). Key competences in the shape of knowledge, skills and attitudes appropriate to each context are fundamental for each individual in a knowledge-based society (European Reference Framework, 2008). They provide added value for the labour market, social cohesion and active citizenship by offering flexibility and adaptability, satisfaction and motivation. Because they should be acquired by everyone, the ERF proposes a reference tool for the member states to ensure that these key competences are fully integrated into their strategies and infrastructures, particularly in the context of lifelong learning. The *European Commission* adopted on 7 September 2007 a *Communication* on “e-Skills for the 21st Century: Fostering Competitiveness, Growth and Jobs” presenting a long term e-skills agenda and including five major action lines at the European level. The *Competitiveness Council* of Ministers adopted Conclusions on a long term e-skills strategy at its meeting on 22-23 November 2007. A successful implementation of an e-skills strategy in Europe is considered of great importance within the renewed Lisbon strategy (European Council, 2008) and as a part of lifelong learning strategies emphasized in the recommendation on key competences (European Reference Framework, 2008).

There were examples of awareness developed among the participants with respect to how to run a project like the pilot project *Lund Calling*. In particular, this awareness concerned the interrelatedness among steps involving changes, and steps that more directly lead to educational development in the implementation (Booth & Anderberg, 2005). The differences concern that all changes do not immediately lead to development, but nevertheless constitute important grounds for how the further implementation will be carried on. That kind of awareness forms a solid foundation, which can be exploited to move onwards, since these experiences have grown out of the particular local context of the Municipality of Lund. This is also in line with the findings

discussed by Irwing, Yeates and Young (2005), indicating that integrating a global perspective into curriculum enriches and challenges conventional teaching and learning practices.

The character of the competencies observed among the teachers participating in the YMP mostly concern *teachers* as *coach*, *mentor*, *supervisor* and *facilitator* (Nordén 2008). We found that there are still too few teachers who are able to participate effectively, using a transdisciplinary approach to teaching. It is still hard, both quantitatively and in terms of innovation, to achieve successful global learning and teaching for sustainable development at secondary school level (see goals outlined in UNESCO, 1977). As emphasized by Wals (2006), teaching sustainability presupposes that those who teach consider themselves learners as well. They must have the competence to interact, the ability to rethink their standpoints and previous knowledge, as well as flexibility in terms of supporting transdisciplinary permeability to relearn – thereby developing their view of themselves, and changing in their roles as teachers. Nordén (2008) highlights that the role as teacher in global contexts may have to be redefined, to embrace a transformation from basically ‘providing teaching’, towards adding a goal-oriented form of coaching.

Transformative learning emphasizes ‘learning for being’, alongside learning for knowing and learning for doing. It requires permeability between disciplines, university and the wider community, and between cultures, along with the competence to integrate, connect, confront and reconcile multiple ways of looking at the world. (Wals, 2006, p. 55)

According to Nordén (2008), the interaction between teacher and pupil takes the form of dialogues via networked teaching, through which the teacher role changes in direction of having more of a guiding nature. This allows participants to experience a community of learning, and the basis for a transdisciplinary teaching space. In this context, a more *holistic approach* appears, due to *integration between the subject ‘sustainability’, the process, and the relationships pupil – pupil and pupil – teacher*. The emergence of a holistic approach is particularly enhanced in these specific global settings (Nordén, 2008).

Even though a number of countries have made significant advances towards implementing environmental education programmes, witnessed by UNESCO (1977), a considerable need for innovation obviously remains. Necessary innovation concerns above all approaches and methods for secondary levels of education towards sustainability. Suitable methods and approaches for increasing exchanges within and among countries are also needed.

Wals (2009) calls for more engaging local forms of monitoring and evaluating the progress of ESD, in the form of mid-DESD reviews, e.g. halfway into the UNESCO Decade of Education for Sustainable Development (DESD), which runs in the period 2005-2014. Wals (2006) has earlier pointed out, that a serious didactical re-orientation is required for programming sustainability. He focuses on competencies and higher thinking skills as a foundation for appreciating holistic principles, understanding critical systems, and practical systemic competencies.

Conclusions

Competence to act

Our main conclusions are illustrated below (Figure 1). These conclusions draw on the results obtained in the present study, and the literature review carried out. This figure shows that competence to act globally presupposes a holistic approach to the relationships between knowledge, skills and attitudes. Competence to learn online is a way to gain democratic action competence. Developing relevant skills among teachers and pupils is in this case of central interest, since such skills prove to have a particular function in connection with acting globally. The development of knowledge and attitudes is dependent on the extent to which these skills are developed or not. This has also been pointed out in earlier research (see for instance Anderberg, Nordén & Hansson, 2009; Nordén, 2008; Booth et al., 2007). Rickinson (2001) and Hansson (2000) found that in the process of shifting from 'environmental knowledge' to 'knowledge for SD', the nature of learning objectives has changed, to work on developing 'knowledge to act' rather than 'knowledge as a possession'. The field of SD is complex, and therefore gives ample opportunities for different interpretations and actions. It follows that the challenges involved in attempts to create a global classroom and in that way contribute to SD are above all a matter of learning to approach complexities (Rost, 2004; Scott & Gough, 2003).

Figure 1. Arena created by implementation

ARENA CREATED BY IMPLEMENTATION EXPECTATION



Nordén & Anderberg

For further implementation of the project *Lund Calling*, it is recommended that focus be placed on the development of the following four features, aiming to enhance the competence to act.

- Democratic skills

When it comes to the democratic competence to act, the pupils especially need help to develop democratic skills, such as being able to discuss in public. They should be encouraged to see, formulate and raise questions, conduct investigations, as well as critically read and write about things concerning their own lives, and in society, that they themselves might identify as important issues. The pupils must experience that they are listened to when they give voice to and express an opinion, even if they touch on difficult issues and critically examine sensitive topics. Young people need to gain the democratic skills to be heard in a respectful way as citizens (Östman, 2003). They need to get a confirmation of the notion that a participatory approach among young people is beneficial - at school, in society, and in life as such – in all our common aspirations and strivings towards sustainability (SOU 2004:104; Öhman, 2008).

Democratic skills may be considered as action competence for sustainable development, including actions on the individual level, as well as on a structural level, aiming to change life conditions also globally, according to young respondents actively organising sustainability activities (Almers, 2009). Young people do not have total influence in society, nor are they prepared for the freedom offered to take full responsibility for sustainability challenges in global settings. They experience that it is positive to be let free, but at the same time they need the tools to enter into a deeper knowledge formation and to grasp the complexity of learning in a global classroom. Engaged and actively working pupils must have access also to tools for understanding collaboratively. Understanding evolves in the course of training, and as the pupils' skills develop, but also their level of engagement. This has to be seen from a process perspective, where increased influence contributes in a higher degree to better-developed competence to act democratically in the long run. ESD content is complex, but pupils engaged in working with this content – and with the GLSD in particular – thereby also gain skills and deeper understanding of the content, through learning activities in a global setting carried out locally.

- Global teacher teamwork

Attention should be devoted to providing an option for teachers to reach out in different learning environments – maybe even different countries. A global teacher team could be created, that meet

and network together online in a global teacher room. By pooling knowledge and experiences, some of the experienced challenges might turn into opportunities. Teachers could discuss and plan lessons together, using one another's professional skills, swapping experiences, exchanging ideas to design learning and teaching modules, in complex knowledge areas of a global nature within ESD / GLSD. A fruitful and inspiring process of sharing could lead to personal and professional development (Nordén, 2008).

- *Local teacher teamwork as a means for transdisciplinary knowledge formation*

Despite the ambitions and efforts towards sustainability, teachers may experience that they lack full competence and enough scheduled time for the knowledge field of ESD at school. They therefore sometimes hurry too much, and do not have time to develop long-term plans and thinking. But conducting education for SD is not a quick fix. Long-term work is imperative. Teachers from different disciplines teaching different subjects i.e. social science, biology, language (English for instance), home economics and/or some technical subject, could go together and teach specific issues together as a professional local teaching team. A kind of transdisciplinary integrated competence would then form the basis for taking additional steps towards the implementation of complex GLSD. The integration of subjects brings the ambition for sustainability closer to a holistic approach to knowledge formation.

- *Organisational implementation tools* are identified by the headmasters as key competencies for development. Also, the function of curriculum and course syllabi as steering documents needs to be overviewed and revised. The question of where to place *sustainability* in the curriculum of education in general is, according to Wals (2006), rather one of innovation and systemic change within our schools and institutions, than one of integration. This will allow sustainability learning to assume more of a transformative approach (Wals, 2006), facilitating the implementation processes in educational institutions. Growing flows of knowledge, people and financing cross national borders (Marginson & Rhoades, 2002; OECD 2009), contributing to worldwide collaboration and development, as well as competition. The effects of globalisation have progressively more impact – not only on higher education (OECD, 2009) – but on education in general. How then could the future education scene look at the global level? What are the strengths and weaknesses brought by globalisation to online learning and teaching of sustainability issues and ESD? How can learning – and teaching – institutions and organisations locally cope with the implementation of GLSD, or benefit from future developments in their

search for implementation tools?

In the light of new visions of learning “along the way” (Bateson, 1994), the following quotation by Mosidi might inspire further motivation and provide impetus to initiate the implementation of GLSD programmes, such as the *Lund Calling* project, even with limited resources and capacity:

./.../ haste can be the ally of perfection. The faster you get started, the better. You just have to stay continually aware of people’s reactions and correct your plan as you go along. The great solution is step by step. Getting started is what is important. (Mosidi, 2005, p. 637)

Through the pilot project *Lund Calling*, the local government in the Municipality of Lund has touched on the key responsibility of making sustainable development a reality. For sustainability to be achieved, many stakeholders and various actors with differing aspirations need to pull together globally – a task easier said than done (Mosidi, 2005). A long-term GLSD commitment – creating individual and collective awareness through pedagogically anchored teaching and learning – develops new ways to make changes towards sustainability.

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For more information about the YMP and the pilot project Lund Calling, please, visit the following web sites:

IIIEE at: <http://www.iiiee.lu.se/site.nsf/AllDocuments/3FF88126AF2B70EDC1256F6B00489555>

Lund Calling at: <http://www.lucus.lu.se/lundcalling/>

YMP at: <http://www.iiiee-ymp.org/> and http://www.iiiee.lu.se/geyc/geyc_raport/index.htm and <http://www.iiiee-ymp.org/drupal/index.php?q=node/332>

Learning Lund Report 2007:2 at:

http://www.ll.lu.se/fileadmin/user_upload/Laerande_Lund/LLrep20072eng.pdf

(June – December, 2008)

Lund Calling: Datainsamling – efter start av Part 1 – elevfrågor

Hur upplever du YMP- kursen har varit?

- Vad är det som du tycker är annorlunda mot annat du gjort innan?

Hur har det varit att arbeta tillsammans några stycken, som ni har gjort nu?

- Hur går det till när ni löser uppgifter?

Är det något du tycker du har lärt dig?

Är det något du saknar i YMP-kursen så långt?

- Är det ngt som kan bli bättre?

Kunskapsfrågor (återkommande):

Vad tänker du om klimatet och klimatfrågor? Hur tänker du om det?

Vad vet du om växthuseffekten? Vad betyder "global warming" för dig?

Vilka tankar har du om energi (-resurser/-situationen/-frågor)?

Attitydfrågor:

Vad som är lätt och svårt med nätbaserat lärande?

Vad är lätt och svårt i virtuella klassrum/med nätbaserat globalt lärande för hållbar utveckling?

Har deltagandet i YMP påverkat ditt arbete på ngt viss i skolan för övrigt? Hur?

Har deltagandet påverkat dig i vardagen för övrigt? Hur?

Är det något du vill tillägga?

INTERVIEW GUIDE

Appendix 2

(October, 2008)

Lund Calling: Datainsamling – avhopp elever – intervjufrågor

Har du några synpunkter på YMP-kursen?

- *Hur ser du på YMP-kursen – beträffande både form och innehåll?*

- *Hur uppfattar du YMP-kursen? Något du saknar?*

Vad var bra?

Vad var dåligt?

Varför hoppade du av YMP?

Vad gjorde att du hoppade av YMP?

Tycker du att du missade något när du hoppat av YMP?_

Vad kan du tänka kunde ha hindrat avhopp?

Skulle du kunna tänka dig att börja YMP igen?

- *Vilka REFLEKTIONER har du?*

- *Hur tänker du själv kring detta?*

Är det något mer du vill tillägga?

INTERVIEW GUIDE

Appendix 3

(October, 2008)

Lund Calling: Databasinsamling – retrospektivt efter part 1-3 – elevfrågor

Hur upplever du YMP- kursen har varit?

- Vad är det som du tycker är annorlunda mot annat du gjort innan?

Hur har det varit att arbeta tillsammans några stycken, som ni har gjort?

- Hur har ni arbetat med att lösa uppgifter?

Är det något du tycker du har lärt dig?

Är det något du saknat i YMP-kursen så långt?

- Är det något som kan bli bättre?

Har du några förslag på ändringar?

Kunskapsfrågor:

Vad tänkte du om klimatet och klimatfrågor innan du började kursen?

Hur tänker du om det nu efter att kursen är avslutad?

Vad visste du om växthuseffekten (global warming) innan du började kursen ?

Vad betyder "global warming" för dig nu?

Vilka tankar hade du om energi innan kursen började och nu efter den har avslutats
(-resurser/-situationen/-frågor)?

Attitydfrågor:

Vad är lätt respektive svårt med nätbaserat lärande?

Vad är lätt och svårt i virtuella klassrum och nätverksbaserat (globalt) lärande för hållbar utveckling?

Har deltagandet i YMP påverkat ditt arbete på något vis i skolan för övrigt? Iså fall hur?

Har deltagandet påverkat dig i vardagen för övrigt? I så fall hur?

Är det något du vill tillägga innan vi avslutar samtalet?

Lund Calling: Datainsamling – i samband med part 1 – lärarfrågor

Har du tidigare arbetat med undervisning om hållbar utveckling i globala/internationella sammanhang?

Hur ser du på att integrera globalt lärande för hållbar utveckling i den ordinarie undervisningen enligt YMP?

Vilka är möjligheterna?

Vilka är svårigheterna att konkretisera detta?

Vilka är möjligheterna respektive hindren - överlag - med att integrera globalt lärande för hållbar utveckling i den ordinarie undervisningen?

Hur ser du på elevernas/lärares motivation?

Hur kan avhopp undvikas?

Vilka erfarenheter har du utav av att undervisa - i grupp, - online, - lokalt resp. - globalt om hållbar utveckling?

Vilka tankar har läraren om kompetens (-behov) med anledning av integrering av globalt lärande för hållbar utveckling i den ordinarie undervisningen?

Är det något mer du vill tillägga?

(October, 2008)

Lund Calling: Datainsamling – retrospektivt efter part 1-3 – lärarfrågor

Har du tidigare arbetat med undervisning om hållbar utveckling i internationella sammanhang?

Hur ser du på att integrera globalt lärande för hållbar utveckling i den ordinarie undervisningen enligt YMP?

Vilka är möjligheterna?

Vilka är svårigheterna att konkretisera detta?

- *Vad tänker du på då?*
- *Något specifikt?*
- *Kan du ge exempel?*

Vilka är möjligheterna respektive hindren - överlag - med att integrera globalt lärande för hållbar utveckling i den ordinarie undervisningen?

- *Vilka REFLEKTIONER har du?*
- *Hur tänker du själv kring detta?*
- *Hur ser du som lärare på hur man kan hantera det här?*

Hur ser du på elevernas och lärarnas motivation?

Hur kan avhopp undvikas?

Vilka erfarenheter har du utav av att undervisa - i grupp, - online, - lokalt resp. - globalt om hållbar utveckling?

Vilka tankar har läraren om kompetens (-behov) med anledning av integrering av globalt lärande för hållbar utveckling i den ordinarie undervisningen?

Hur ska man arbeta för att integrera GLSD i den lokal kurs-/läroplanen?

- *Varför är det viktigt?*

Vilken roll har skolans organisation och ledning?

Övergripande frågor:

- *Vad är svårt och lätt med nätbaserat globalt lärande för hållbar utveckling?*
- *Har deltagandet påverkat ditt arbete i skolan för övrigt? Hur?*
- *Har deltagandet påverkat dig i vardagen för övrigt? Hur?*

Om YMP-kursen: Hur upplever du YMP-kursen? - Något som du saknar?

Är det något du vill tillägga?

(October, 2008)

Lund Calling: Datainsamling – skolledare intervjufrågor

Har du tidigare arbetat med implementering av eller undervisning om hållbar utveckling globalt eller i internationella sammanhang?

Hur ser du på att integrera globalt lärande för hållbar utveckling i den ordinarie undervisningen *i enlighet med YMP*?

Vilka är *möjligheterna*?

Vilka är *svårigheterna* att konkretisera detta?

Hur ser du på elevernas och lärarnas motivation?

Hur kan avhopp undvikas?

Vilka erfarenheter har du som skoledare av att organisera nätbaserad undervisning?

Vilka är styrkor och svagheter med nätbaserat globalt lärande för hållbar utveckling?

Vilka tankar har du som skoledare om lärarnas kompetens (-behov) med anledning av integrering av globalt lärande för hållbar utveckling i den ordinarie undervisningen?

Hur kan skoledare arbeta för att integrera GLSD lokalt i kursplaner?

Vilken roll har skolans organisation och ledning i att bedriva GLSD - generellt?

- *Ser du möjligheter resp. svårigheter i att organisera ämnesövergripande undervisning?*
- *Ser du några möjligheter resp. svårigheter i att lärare arbetar i arbetslag?*
- *Har det konsekvenser för integrering av program som YMP?*
- *Hur ser du på YMP-kursen – beträffande både form och innehåll?*
- *Hur uppfattar du YMP-kursen? Något du saknar, något du vill förändra?*

Är det något mer du vill tillägga?

Lund Calling: Datainsamling longitudinell nr 2– implementering – elevfrågor

Hur upplever du YMP- kursen har varit?

- Vad är annorlunda mot annan undervisning?

Hur är det att samarbeta lokalt och globalt i YMP?

- Hur går det till när ni gör inlämningsuppgifterna (learning activities)?

Har ditt sätt att samarbeta förändrats sedan Du började med YMP – och nu?

Vad lär du dig av att delta i YMP? (t.ex. i modulen: actors in society alternativt modul 8 el. 9).

Vad lär du dig inte i YMP?

Är det något du saknar i YMP-kursen så långt?

- Är det ngt som bör ändras? Hur?

Kunskapsfrågor (återkommande):

Vilka tankar har du om energi och energifrågor (-situationen)?

- Vad har du för uppfattning om energiresurser/-tillgångar/-förbrukning?

Vad vet du om växthuseffekten (global warming)?

- Vad betyder ”global warming” för dig?

Vad tänker du om klimat och klimatfrågor?

- Hur tänker du på klimatet?

Attitydfrågor:

Vad tycker du om nätbaserat lärande?

- Hur är det att lära i globala klassrum?

- Vad är lätt och svårt att lära om hållbar utveckling?

Har deltagandet i YMP påverkat ditt skolarbete på ngt vis? Hur?

Har du personligen påverkats (t ex i vardagliga situationer) av att du går YMP? Hur?

Hur är din syn på framtiden? (Har den förändrats? HUR?)

Är det något annat du tycker är viktigt att ta upp / tala om?

(March, 2009)

Lund Calling: Datainsamling longitudinell nr 2 – implementering – lärarfrågor

Hur upplever du YMP?

- Vad är annorlunda mot annan undervisning?
- Vad tycker du om nätbaserat lärande?
- Hur är det att undervisa i globala klassrum?
- Hur är det att undervisa lokalt och delta i ett pilotprojekt (som Lund Calling)?
- Vad är utmaningarna i att undervisa och lära om hållbar utveckling?
- Är det något du saknar i YMP – VAD?
- Är det något som bör ändras – HUR?

Har deltagandet i YMP påverkat ditt arbete i skolan på något vis? HUR?

- Är det något du har lärt dig av att delta i YMP? VAD i så fall?
- Hur är det att samarbeta med människor lokalt (respektive globalt)?

Hur ser du på undervisning och lärande för hållbar utveckling?

Vilka är möjligheterna resp. svårigheterna att konkretisera undervisningen?

Hur integrerar du globalt lärande för hållbar utveckling i den ordinarie undervisningen?

Hur ser du på lärares motivation när det gäller undervisning och lärande för hållbar utveckling?

Har du personligen påverkats (t ex i vardagliga situationer) av att du deltar i YMP? Hur?

Hur är din syn på framtiden? (Har den förändrats med undervisningen av YMP? Hur?)

Är det något annat du tycker är viktigt att ta upp/tillägga?

Förebyggande miljöarbete i ett globalt perspektiv (2008-05-28)

Ämne: Biologi
Kurs: Förebyggande miljöarbete i ett globalt perspektiv
Poäng: 100p
Kod:
Förkunskapskrav: NkA

Kursbeskrivning:

Kursen genomförs i samarbete med Internationella Miljöinstitutet vid Lunds Universitet. Utbildningen bedrivs dels som en interaktiv distansutbildning via Internet, där undervisning och kommunikation sker på engelska, dels en lärarledd undervisning på den egna skolan. Distansutbildningen består av fyra delar. Kursen "Förebyggande miljöarbete i ett globalt perspektiv" omfattar de tre första delarna.

Del 1. Introduktion till den egna naturmiljön.

Här behandlas begrepp som t ex ekologi, biologisk mångfald, olika systems interaktion och beroende, hållbar utveckling och Agenda 21.

Del 2. Förebyggande miljöstrategier. "Prevention is better than Cure"

där du bland annat lär dig identifiera aktörerna som kan påverka utvecklingen av miljön, och hur man därigenom skapar redskap för att påverka

Del 3. Sharing our Future; Projektarbete

Elever tränas i sin förmåga att identifiera, dokumentera och söka lösningar på ett miljörelaterat problem i sitt lokalsamhälle och presentera sitt arbete på ett överskådligt sätt, och dessutom att kommunicera med lokalsamhället och med ungdomar i andra länder.

World Youth Environment Convention

Projektredovisning. I samband med presentationen av projektarbetet kommer de elever som producerat arbeten med hög kvalitet att erbjudas möjlighet att delta i ett globalt miljökonvent. Delegater från ca 100 länder, som också genomgått utbildningen träffas. De lokala miljöproblemen sätts i ett globalt perspektiv, samtidigt som de internationella kontakter som byggts upp under kursens gång befästs.

Mål.

- Eleverna erhåller en ökad medvetenhet om viktiga miljöfrågor.
- Eleverna lär sig nya koncept om preventiva miljöstrategier och renare produktion
- Eleverna lär sig undersökande och problemlösande färdigheter vad gäller miljöfrågor.
- Eleverna inser att globala miljöproblem har ett lokalt ursprung genom kommunikation via internet med ungdomar som deltar i ett liknande projekt i ca 100 länder.
- Elevernas förmåga att kommunicera på engelska stärks

Lärande Lund

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