

## **Strategy for intensity and shared views in a reformed supervisor training program**

### **Abstract**

#### Background

In 2006 Luleå University of Technology will be characterised by a new view where learning has been developed into a common creation of knowledge – a type of learning where students, teachers and researchers, as well as the world around, participate actively and on equal terms. Research as the base for the growth of knowledge in this view requires good quality of PhD supervision. To be able to meet this requirement the project "Strategy for intensity and shared views in a reformed supervisor training program" was developed. The project is founded by the National Agency for Higher Education and will proceed until 2002.

#### Aims

The project aims to improve the quality of postgraduate studies with specific focus on supervision leading to an increased number of PhD graduates.

#### Expected results of the project

- Promote interest and ability to supervise and to support development of network and mentorship among supervisors.
- Promote a mutual progression involving both supervisors and PhD students by focusing on the importance of shared views and dialog in the interplay between the supervisor and the student.
- The supervisor-training course will contribute to improvement of professional competence of supervisors and will be integrated in the annual activities of the University.

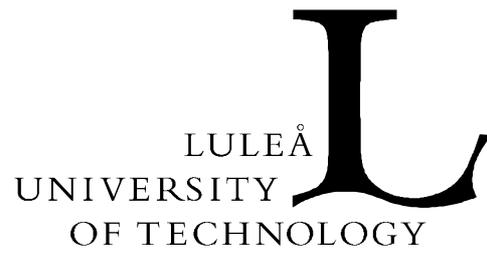
#### Line of action

The project is disposed as a three-step progression. The first step aims at new supervisors and new postgraduate students. The course will start in October 2001 and will consist of four all-day seminars and a two-day live-in course. During the live-in course the participants will be given opportunities of reflecting on their individual needs, motivation and creativity. The participants will also get some training in analysing problematic situations caused for example by conflicts/stress etc.

The all-day seminars will deal with such matters as examination requirements, financing of research, research ethics, mentorship, teaching approach and communication.

Step two is already an established course for prospective associate professors. To integrate this step into the project the participants will formulate their own individual progression plan.

The aim of step three is to offer experienced supervisors development of professional competence. The design of the course will be based on the individually needs of the participants combined with joint sections.



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**Strategy for intensity and shared view in a reformed  
supervisor training programme**

**Final report**  
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## Table of Contents

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<b>Background</b> .....	<b>3</b>
Purpose.....	3
Objectives.....	3
<b>Start of the project</b> .....	<b>3</b>
<b>Structure</b> .....	<b>4</b>
<b>Phase 1</b> .....	<b>4</b>
Participants.....	4
Course contents.....	4
<b>Phase 2</b> .....	<b>5</b>
<b>Phase 3</b> .....	<b>5</b>
Participants.....	6
Course contents.....	6
<b>Evaluation</b> .....	<b>7</b>
Results of evaluation.....	7
<b>Conclusions</b> .....	<b>7</b>

### Appendix

Appendix 1 Overview of the contents of a new supervisor training programme at Luleå University of Technology

## **Background**

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In the spring of 2001, the Swedish Council for the Renewal of Higher Education invited the country's seats of learning and actors in postgraduate education to apply for financial support for the development of supervisor training. The joint Postgraduate Studies Group of the Faculties of Engineering and Arts & Sciences at Luleå University of Technology (LTU) developed a project idea that resulted in a grant of SEK 500,000 during the period 2001–2002. LTU has since 1999 been holding an “associate professorship course” (“docentkurs”) that is compulsory for qualification as an associate professor.

### **Purpose**

The project is intended to represent part of LTU's strategic work “*The Creative University*”, with a view to achieving the long-term development and quality assurance of postgraduate education, with a special focus on supervision. The project is also meant to contribute to achieving the University's objective of an increased production of PhDs.

### **Objectives**

The objectives of the project are as follows:

- the new supervisor training programme shall constitute a sustainable model for the competence development of supervisors and after the end of the project period, the programme will be part of LTU's activities;
- the interest in supervision and the will to supervise will increase, which is a prerequisite for increasing the production of PhDs;
- to raise the quality of supervision through increased awareness and understanding of the dialogic interaction in supervision;
- to promote a common development process that will involve both supervisors and doctoral students;
- to achieve a concordance of views and understanding between supervisors and doctoral students concerning central themes in the postgraduate education process;
- to generate the building of networks and mentorship for supervisors active in different spheres of science.

## **Information**

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The project has several times attracted the attention of two of the largest daily newspapers of the County of Norrbotten. The project idea and the implementation of the project have been presented and discussed with the Deans and the person responsible for postgraduate education at Monash University in Australia. Moreover, the project has been presented at the fifth national quality conference of the Swedish National Agency for Higher Education in Malmö in March 2003.

## **Start of the project**

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Before the start of the project, a seminar was held on 5<sup>th</sup> October 2001 where conditions and the development possibilities for postgraduate education were discussed. The seminar commenced with a presentation of the project. Agneta Bladh, State Secretary at the Ministry of Education and Science, Bengt-Olof Elfström,

Research Manager at Volvo Aero, and Ingegerd Palmér, the President of Luleå University of Technology, presented their views of society's, the University's, and trade & industry's need for postgraduate education and its development.

## Structure

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The new supervisor training programme was designed in three phases (see Appendix 1). **Phase 1** targeted those who had recently taken their PhD, as well as newly admitted doctoral students. **Phase 2** consisted of the University's present "Associate Professorship Course" ("docentkurs"). **Phase 3** targeted future professors and appointed professors, heads of divisions and chair holders, with an intention to offer experienced supervisors continuous development.

## Phase 1

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In the implementation of Phase 1, the same course was held on two occasions, i.e. in the autumn of 2001 and the spring of 2002. In the autumn of 2001, the course involved four seminar days and a two-day residential part for the supervisors. The doctoral students took part in the course during three of the seminar days and during the residential part. In the spring of 2002, the course was extended by one seminar day for the supervisors.

### Participants

A total of 44 doctoral students and 34 supervisors submitted applications expressing their interest in the course (see the table below for a breakdown).

#### Applicants (Selection)

Course period	Supervisors	Doctoral students	Faculty of Eng.	Faculty of Arts & Sc.	Women	Men
Autumn term 2001	19 (15)	15 (12)	23 (16)	11 (11)	16 (13)	18 (14)
Spring term 2002	15 (15)	29 (19)	26 (19)	18 (15)	25 (19)	19 (15)

When making the selection, the aim was to achieve a balanced distribution of supervisors and doctoral students. In order to stimulate the building of networks and interaction between the subject areas of the two faculties, one factor taken into consideration was the faculty and division to which each participant belonged. An additional aim was to achieve an even distribution according to sex.

The course requirements stipulated 80% attendance, and a total of 23 supervisors and 24 doctoral students completed Phase 1. For the doctoral students, the course resulted in 2 credits\*.

### Course contents

To achieve a concordance of views and an understanding of central themes in the postgraduate education process, some of the segments included in the course were held for both the supervisors and the doctoral students together.

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\* At Swedish universities, one credit represents one week's full-time study and 40 credits one full academic year.

The following themes were dealt with:

#### *Postgraduate education at LTU*

This part of the course treated postgraduate education at LTU and the efforts being made internally to enhance the quality of postgraduate education. Both the supervisors and the doctoral students had the opportunity to discuss which measures they considered to be central for continued improvement.

The University's strategic work on "*The Creative University*" was discussed from the perspectives of research and postgraduate education, and an insight was provided into the University's internal allocation of resources and planning cycle. The set of rules and regulations that covers the postgraduate studies of the doctoral students was presented. Other segments included in the course were the financing of research, research ethics, and the research communication.

#### *The postgraduate education process*

The supervisors and doctoral students worked on the identification of their roles and the expectations which the supervisors and doctoral students are subjected to respectively. In a separate part of the course, the supervisors dealt with supervision in relation to constructivistic theories, self-controlled learning and coaching.

#### *Self-awareness and creativity*

Each time the course was held, it included a residential part with mixed groups of doctoral students and supervisors. The focus of the two days was on work concerning self-awareness and on providing insight into one's own ability to take action, motivation, creativity and performance. The work was based on a close dialogue within the group and, among other things, the participants were trained in giving positive and negative feedback.

#### *Supervisor support – development plan*

The supervisors had the opportunity to work on the creation of a strategy for their own development, focusing on finding ways to create a balance between their profession and themselves as individuals. Among other things, the discussions concerned the difference between being a supervisor and being a mentor, and supervising someone of the opposite sex. During the group work the supervisors were able to deal with the issue of what support they needed to develop their supervision.

## **Phase 2**

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This course is provided for researchers as part of the process of qualifying for an associate professorship. The project does not comprise this aspect of the course. However, in order to integrate Phase 2 into a continuous competence development, new course segments and working methods have been developed.

## **Phase 3**

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Phase 3 commenced with a discussion seminar entitled "Postgraduate Education – the Optimal Model". The following experts were invited to participate in the discussions: Lars-Gunnar Ekedahl, President of the University of Trollhättan/Uddevalla, Lars Eliasson, Director of the Swedish National Graduate School of Space Technology, Jerker Delsing, Head of EISLAB, Lena Abrahamsson, Director of the graduate school of Arena Teaching & Learning, Rikard Mäki, Chairperson of the Doctoral Students'

Section of the Students' Union. During the seminar, discussions concerned the characteristics of good postgraduate education and the existing conditions for creating good postgraduate education.

Phase 3 was implemented during the autumn of 2002. This phase of the training programme comprised two seminar days and a 2½-day residential part for the supervisors.

### **Participants**

A total of 23 supervisors submitted applications expressing their interest, of whom 7 belonged to the Faculty of Arts & Sciences and 16 to the Faculty of Engineering. Sixteen of the applicants were invited to participate, 5 women and 11 men. The course requirements stipulated 80% attendance and Phase 3 was completed by 11 supervisors.

### **Course contents**

The course contained five themes with the following contents:

#### *Visions and objectives for continued development of research/supervision*

This part focused on LTU's management documents, objectives and visions for postgraduate education. The participants' views of their role as a supervisor, expectations and measures for stimulating the creation of a productive research environment were discussed under the leadership of President Ingegerd Palmér and Vice-President Johan Sterte.

#### *Developing as a supervisor*

The participants had the opportunity of working with objectives and tools to support their own development as supervisors. Individual interviews followed by feedback constituted the basis of the participants' continued work, during the course, on formulating their objectives and priorities.

#### *Supervisor - mentor - leader*

During a residential part of the course, the group worked on issues concerning different aspects of supervision. Among other topics, the "supervisor-doctoral student" relationship was dealt with from the perspectives of commitment, trust, responsibility and conflict. The participants' own experiences constituted a basis for discussions on group processes, the ways in which groups develop, and the type of leadership that is required in different phases.

#### *A creative environment*

With the help of exercises in creativity, association exercises and lectures, the participants had the opportunity of working on questions concerning needs and priorities in order to achieve a creative environment.

## **Evaluation**

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Each phase has been evaluated in writing after the completion of a course, and the participants' oral reflections have been utilised for feedback to lecturers and for course development.

### **Results of the evaluation**

#### *Phase 1*

The evaluations of Phase 1 indicate a mainly positive reception of the course taken as a whole. Generally the participants mention that they have acquired an increased understanding of both the possibilities and the difficulties encountered when supervising and pursuing postgraduate studies. According to the participants, the fact that the course has been shared by both supervisors and doctoral students has been of considerable value, since this has given them greater understanding of and insight into the different needs that exist. Many participants emphasise the fact that the course has given them the possibility of meeting other supervisors and doctoral students from different subject areas. One doctoral student says, "It gives a newly admitted doctoral student an insight into the University's research, knowledge of how research is conducted, of prerequisites, of rules and regulations." Some participants want to have more concrete examples of how different divisions work with supervision.

#### *Phase 3*

The evaluation of Phase 3 shows that the participants are of the opinion that arranging this type of course is of great value. They emphasise the fact that supervising is quite a lonely task, and consequently the need to discuss issues concerning situations in supervision is great.

The most rewarding aspect consisted of the contact and conversations with colleagues that took place during the course. However, it is the experience of the participants that the content of the course was too extensive, and they want to have a clearer connection to the work involved in research and supervising doctoral students, and to the context in which they operate.

## **Conclusions**

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To be able to build a sustainable model for supervisor training, a continuous dialogue has been held with both the Postgraduate Studies Group (the project's reference group) and the faculty boards on the basis of the course evaluations.

To sum up, an account is given of a reflection on the extent to which the training programme has fulfilled the objectives set up for the project.

- *The new supervisor training programme shall constitute a sustainable model for the competence development of supervisors and that, after the end of the project period, it will be part of LTU's activities.*

The need for supervisor development within the University is reflected partly by the interest shown and the extent to which researchers and doctoral students within the University have contacted the project managers, and partly by the pressure of

applications for the training programme. After the end of the project period, the University decided to implement Phase 1 and 2 of the supervisor training programme during 2003.

The evaluations indicate a mainly positive reception of the training programme taken as a whole. However, working on the design of a sustainable model is an ongoing process in which one continually makes use of the participants' opinions about improvements. To facilitate the continuous competence development of supervisors, Phase 3 will be developed in the direction of a clearer connection to the supervision situation.

- *To promote a common development process that will involve both supervisors and doctoral students.*
- *To achieve a concordance of views and understanding between supervisors and doctoral students concerning central themes in the postgraduate education process.*
- *To raise the quality of supervision through increased awareness and understanding of the dialogic interaction in supervision.*

One of the strengths of the project has been the fact that the course in Phase 1 has been held with a mixed group of supervisors and doctoral students. The comments in the written evaluation show that the course facilitates interaction and dialogue, which in turn contributes to a common development process. Below follow a few quotations from the evaluation that mirrors the above reflection:

*“I have been able to reflect my thoughts about supervision against other people’s thoughts, and have thus had my view somewhat transformed, as well as deepened. I think I can say that it has provided me with clearer borders for what I can expect of myself and my supervisor, and I have also reflected a great deal on myself as a future supervisor. My thoughts about seeing the individual in each instance of supervision have been ‘nourished’.*

*I didn’t really know what to expect before the course, and therefore the experience turned out to be enormously positive. Acquainting oneself with the experience of doctoral students and graduates with PhDs is very positive.”*

*“On the whole the course has been very good and is indispensable for every supervisor/doctoral student, in my opinion. Certain segments can be replaced with something else, but on the whole it has been rewarding. Opportunities have been created for contacts. We have had the chance to meet one another and have gained an insight into each other’s activities, successes and setbacks, which we would never have done without this course. Time for reflection and new thoughts. The residential format is completely necessary to get peace and time to create opportunities for contacts and to do concrete exercises.”*

If Phase 3 is to be able to contribute to an increased awareness and understanding of the dialogic interplay in supervision, once again, a clearer connection to the supervision situation must be developed in the course.

- *To generate the building of networks and mentorship for supervisors active in different spheres of science.*

In the course of the project period, the participants in both Phase 1 and 3 have stated that meeting one another across departmental boundaries and with a focus on issues concerning postgraduate studies is of considerable value. The courses have been able to meet this need, and the participants have expressed the importance of continuing to build networks by requesting follow-up training.

In the course of the training programme, the term *mentorship* in the objective was reformulated and broadened in that the supervisors defined their own need for and design of supervisor support. The purpose of this was to create a platform for further work on the development of methods of supervisor support.

- *That the interest in supervision and the will to supervise will increase, which is a prerequisite for increasing the production of PhDs.*

The training programme has shown that there is great interest in competence development and supervision issues. By investing in supervisor training, the University is contributing to continued commitment to these questions.

## APPENDIX 1

### Overview of the contents of a new supervisor training programme at Luleå University of Technology

Course segments	Phase 1		Phase 2	Phase 3
	Supervisor	Doc. student		
History of science – History of ideas and sciences*	X	X		
Postgraduate education process*	X	X		
Rules and regulations <sup>#</sup>	X	X	X	
Research areas and financing of research <sup>#</sup>	X	X		
Fundamental pedagogics and pedagogical methods*	X	X		
Communication of research*	X	X		
Communication*	X	X		
Self-awareness and ability to take action*	X	X		
Psychology of transformation and stress management*	X	X		
Resolution of conflicts*	X			
Contextual influence	X			
Supervisor support*	X			
Individual development plan*	X		X	X
Supervision			X	
<i>The creative university</i>			X	
Research financing			X	
Research ethics <sup>#</sup>	X	X	X	
Requirement levels for postgraduate degrees			X	
Leadership*				X
Strategy for development*				X
Visions and objectives*				X
Developing mentorship*				X
Stress management*				X

\* New segment

<sup>#</sup> Developed segment



## Developing Graduate Supervisor Training

## STRATEGY FOR INTENSITY AND SHARED VIEW IN A REFORMED SUPERVISOR TRAINING PROGRAMME

### **Case study for institution project 018**

**Luleå University of Technology (LTU)**

<i>Budget:</i>	Council funding:	500,000 SEK
	Other:	698,500 SEK
<i>Staffing:</i>		0.40 FTE
<i>Audience:</i>	Phase 1 targeted those who had recently received their graduate degrees, as well as newly admitted doctoral students. Phase 3 targeted future professors and appointed professors, heads of divisions and chair holders, with an intention to offer experienced supervisors a program for continuous development.	

### **Project Overview:**

The project, which is organized as a three-phase progression aims to improve the quality of postgraduate studies with a specific focus on the supervision necessary to increase the number graduate students that successfully complete their studies. The training programme has shown that there is great interest in competence development and supervision issues. By investing in supervisor training, Luleå University of Technology is contributing to a renewed commitment to these questions.

### **Goals**

- Develop a sustainable program for the competence development of supervisors that will be part of regular LTU's activities after the end of the project period;
- Promote an interest in supervision and the will to supervise;
- Contribute to achieving the University's objective to increase the number of degrees;
- Raise the quality of supervision through increased awareness and understanding of the dialogic interaction in supervision;
- Promote a common development process that will involve both supervisors and doctoral students;
- Achieve a concordance of views and understanding between supervisors and doctoral students around central themes in the postgraduate education process;
- Generate networks and mentorship for supervisors active in different scientific domains.

## Objectives

Achieve a concordance of views and understanding between supervisors and doctoral students concerning central themes in the postgraduate education process.

## Format/Length

The new supervisor training programme consists of three different parts; Phase 2 is the University's existing "Associate Professorship Course" ("docent course"). This course is provided for researchers as part of the process of qualifying for an associate professorship and was not included in this project.

The following themes were dealt with during Phase 1; "Postgraduate education at LTU", "The Postgraduate Education Process", "Self-awareness and Creativity", and "Supervisor Support – Development Plan". The course consists of four seminar days and a two-day residential for the supervisors. The doctoral students also participated in three of the seminar days and the residential. A total of 23 supervisors and 24 doctoral students have completed Phase 1, so far. For the doctoral students, the course was worth 2 graduate credits\*.

Phase 3 consisted of the following themes; "Visions and Objectives for Continued Development of Research/Supervision", "Developing as a Supervisor", "Supervisor - Mentor – A Leader" and "The Creative Environment". This phase of the training programme comprised two seminar days and a 2½-day residential for the supervisors. A total of 16 supervisors participated in the course.

## Partners:

*Internal:* The joint Postgraduate Studies Group for the Faculties of Engineering and Arts & Sciences at LTU served as a reference group. The content of each theme was developed together with the invited lecturers from LTU, among others.

*External:* The content of each theme was also developed together with invited lecturers from outside LTU.

*Faculty:* A continuous dialogue has been held with both the Postgraduate Studies Group and the Faculty of Engineering and the Faculty of Arts & Sciences.

## What makes this program effective?

*Program:* The University decided to permanently implement Phase 1 of the supervisor training programme.

*Participants:*

## Assessment:

*Measures used:* Mid-course classroom assessments utilising the participants' oral reflections for feedback to lecturers and for course development. Follow-up surveys after completion of the course have also been a valuable tool for continuous

development.

*Results/Impact:*

The evaluations of Phase 1 indicate a mainly positive reception of the course taken as a whole. Generally the participants mention that they have acquired an increased understanding of both the possibilities and the difficulties encountered when supervising and pursuing postgraduate studies. According to the participants, the fact that the course has been shared by both supervisors and doctoral students has been of considerable value, since this has given them greater understanding of and insight into the different needs that exist. Many participants emphasise the fact that the course has given them the possibility of meeting other supervisors and doctoral students from different subject areas. One doctoral student says, "It gives a newly admitted doctoral student an insight into the University's research, knowledge of how research is conducted, of prerequisites, of rules and regulations." Some participants want to have more concrete examples of how different divisions work with supervision.

The evaluation of Phase 3 shows that the participants are of the opinion that arranging this type of course is of great value. They emphasise the fact that supervising is quite a lonely task, and consequently the need to discuss issues concerning situations in supervision is great. The most rewarding aspect consisted of the contact and conversations with colleagues that took place during the course. However, it is the experience of the participants that the content of the course was too extensive, and they want to have a clearer connection to the work involved in research and supervising doctoral students, and to the context in which they operate.

The participants have expressed the importance of continuing to build networks by requesting follow-up training.

*Next Steps in Assessment:*

To be able to build a sustainable model for supervisor training, a continuous dialogue has been held with both the Postgraduate Studies Group (the project's reference group) and the faculty boards on the basis of the course evaluations.

**Lessons learned:**

One of the strengths of the project has been the fact that the course in Phase 1 has been held with a mixed group of supervisors and doctoral students. The comments in the written evaluation show that the course facilitates interaction and dialogue, which in turn contributes to a common development process. In the course of the project period, the participants in both Phase 1 and 3 have stated that meeting one another across departmental boundaries and with a focus on issues concerning postgraduate studies is of considerable value. The courses have been able to meet this need, and the participants have expressed the importance of continuing to build networks by requesting follow-up training.

## The future

The need for supervisor development within the University is reflected partly by the interest shown and the extent to which researchers and doctoral students within the University have contacted the project managers, and partly by the pressure of applications for the training programme. After the end of the project period, the University decided to permanently implement Phase 1 of the supervisor training programme. The University has also decided to offer a day of joint discussions between doctoral students and supervisors every semester. To facilitate the continuous competence development of supervisors Phase 3 will be striving for a clearer connection to the supervision situation.

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