

# **The Meaning of Student Knowledge. The Case of the International Master Program in Land Management, KTH, Sweden.**

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**Key words:** land administration, land management, academic education, student knowledge, teacher learning, organizational learning.

## **SUMMARY**

Higher education institutions are confronted with major challenges such as those resulting from globalization and internationalization. They further have to respond to increasing expectations by students and employers that graduates will be equipped for rapidly changing and globalizing workplaces (Altbach et al, 2009, Fry et al, 2009, Marginson & Van der Wende, 2007). The work of academic teachers is therefore becoming more complicated and demanding. Next to teaching, academic staff is involved in scientific research. The slogan 'publish or perish' illustrates the importance of research and scientific publications in academic practice. Academic staff has to cope with increasing and competing demands from both teaching and research.

Against this background the University of Twente, The Netherlands, has formulated a research project that explores if and how teaching processes, in particular student – teacher interaction, can be more beneficial to other academic processes in order to cope with the increasing demands placed on the academic profession. The research takes an organizational learning perspective and aims to explore how the expert knowledge of students can contribute to curriculum development and disciplinary knowledge development in an academic discipline. The relatively young academic discipline Land Administration has been selected as the discipline under study. Three international land administration oriented postgraduate programs have been chosen for field studies.

In May 2013 a first field study was conducted at the Royal Institute of Technology (KTH), in Stockholm, Sweden, and concerned the International Master of Science Program in Land Management. The study involved a literature review, document study (university, program and courses, evaluation reports) and interviews with lecturers. Data analysis followed grounded theory methods of text analysis and interpretation. The international nature of the Master of Science Program in Land Management posed many challenges on the lecturers. These challenges resulted in teacher learning and consequently in program and course improvement. The knowledge, skills and attitude of the international students contributed to a large extent to the continuous development and improvement of this Master of Science Program.

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## **1. INTRODUCTION**

Higher education institutions are confronted with major challenges such as those resulting from globalization and internationalization. They further have to respond to increasing expectations by students and employers that graduates will be equipped for rapidly changing and globalizing workplaces (Altbach et al, 2009, Fry et al, 2009, Marginson & Van der Wende, 2007). The work of academic teachers is therefore becoming more complicated and demanding. Next to teaching, academic staff is involved in scientific research. The slogan 'publish or perish' illustrates the importance of research and scientific publications in academic practice. Academic staff has to cope with increasing and competing demands from both teaching and research.

Students attending international postgraduate courses represent professional expertise and country specific knowledge. This knowledge can contribute to disciplinary knowledge development and improved curriculum development, as personal experiences with teaching international students in land administration academic education has shown.

Against this background the University of Twente, The Netherlands, has formulated a research project that explores if and how teaching processes, in particular student – teacher interaction, can be more beneficial to other academic processes in order to cope with the increasing demands placed on the academic profession.

Contemporary theories in teaching and learning are based on constructivist approaches stress the importance of considering students' knowledge in teaching. Organizational learning theories emphasize the processes of individual learning and knowledge sharing for the benefit of the whole organization. Although one would expect differently, disciplinary knowledge development in the teaching process, as a form of teacher's content development and organizational learning in universities, has received virtually no attention in academic literature.

This mismatch between experiences and expectations resulted in formulating a research project aiming to address the following research question: what makes that academic lecturers do or do not engage in knowledge sharing and disciplinary knowledge development with their students? The research takes an organizational learning perspective and aims to contribute to the theory on the relation teaching-research and in particular to teachers' disciplinary knowledge development in the teaching process.

The land administration international higher education is the domain under study. Field studies involve three international post-graduate courses in land administration or the closely related field of land management: Master of Science Programme in Real Estate Development and Financial Services, Land Management Track, Royal Institute of Technology (KTH), Sweden; Master of Science Degree Course in Land administration, ITC – University of Twente, The Netherlands, and the International Master's Programme Land Management and Land Tenure, Technical University Munich (TUM). All courses are international, targeting young and mid-career professionals with at least BSc level, and cover the domain of land administration.

Land administration is a new and evolving discipline of a typical multidisciplinary nature. The expertise of students could contribute to further shaping the discipline and keep track of the rapid and constant changes in the professional and academic field. It is therefore expected that this academic domain can benefit from the outcome of the study. With its focus on international higher education, targeting young and mid-career professionals, it is expected that the field research results in rich data contributing to theory development on teacher content learning.

The paper addresses the preliminary outcomes of the first field study conducted in May 2013 concerning the International Master of Science Program in Land Management at the Royal Institute of Technology (KTH) in Stockholm, Sweden. The aim of the field study at KTH was to obtain a first set of theoretical themes and concepts to answer the main research question. In the next paragraph it will be explained how the field study research was conducted.

## **2. MATERIAL AND METHODS**

The emphasis on constructivist learning and the origin of the research question suggested interpretive research and the use of qualitative - interpretive methods to answer the research question. The following materials and methods have been selected and used for the first field study.

### **2.1. The Research Context**

Before starting the field work a profile was made of the Master of Science Programme in Land Management, to be referred to as the LM Program, at the Royal Institute of Technology (KTH). This was based on program documents; the university's and program website and evaluations. The profile served to inform the research about main aspects of the program and to prepare for the field study. In particular the description of the target student population was used to get started with the interviews. The profile of the LM Program was further elaborated during the fieldwork based on information obtained from the program director, from observations of facilities, analysis of documents such as study guides, evaluations, course pictures and student lists.

Klein & Myers (1999) discussed the conduct and evaluation of interpretative research in information systems. They state that one of the key tasks in interpretive research is seeking

meaning in context. In what they call the principle of contextualisation, ‘the subject matter should be set in its social and historical context so that the intended audience can see how the current situation under investigation emerged’. The principle of contextualisation has been taken as point of reference when developing the profile of the LM Program.

## **2.2. Interviews**

An important part of the field study was based on open interviews. Open interviews have the advantage that they are flexible in terms of structure, contents and questions (Kumar, 2005) and are ‘the most data dense’ (Corbin & Strauss, 2008). For this first field study, with an exploratory nature, the open interview was best suited.

During the field study eight interviews were conducted with academic staff members who were involved in the LM Program. The program manager invited the staff members and made the appointments. The selection of staff members depended on their availability at the time of the field research. A program coordinator or manager was expected to be one of the respondents. The interviews took place from 21<sup>st</sup> till the 31<sup>st</sup> of May 2013. The interviews were held in the interviewee’s office or workspace at KTH in Stockholm.

An interview protocol was prepared and applied for all interviews. The protocol described the steps and approaches before, during and after the interview. An interview checklist was used to guide the actual interview. This guiding document consisted of three parts: the basic structured questions, the main questions and back-up questions. A description of the target student as described on the LM Program’s website was presented to the respondents, with the purpose of setting the scene and getting started with the core part of the interview. The recorded interviews were transcribed and sent to the interviewee for confirmation.

## **2.3 Immediate Reflections**

After the interviews the interviewer took an additional hour for immediate reflection on the interview. The interview reflections included: general impression, main issues of importance for respondent, observations on emotions and difficulties in answering the questions, reluctance or avoidance in responding to certain questions, things not said, unexpected themes and directions of importance for the research, aspects of major or minor concern for the interviewee, other observations. Findings were written down and stored together with the audio-file of the interview.

Major findings of the reflection were taken into account for the next interview. In fact it resulted in a form of iterative interviewing giving more depth and direction to the interviews over time (more focus or introducing new relevant aspects to be questioned or probed). After the last interview, the set of ‘immediate’ interview reflections supported the analysis of the empirical data and the development of emerging themes and theoretical concepts.

Researcher’s reflections and the recording these reflections are an essential part of interpretive research (Corbin & Strauss, 2008, Klein & Myers, 1999, Schwartz-Shea & Yanow, 2012).

What was named by the researcher ‘immediate reflections’ is in the literature referred to as memos. Corbin and Strauss (2008) define memos as ‘specialized type of written records – those that contain the products of our analyses’. Reflection and writing memos is part of the analytic process in interpretive research; they contribute to the theoretical abstractions and generalisations. ‘They move the analysis forward and as such are just as important to the research process as data gathering itself’ (Corbin and Strauss, 2008).

## **2.4 Diagrams**

Diagrams are conceptual visual representations of emerging analytical concepts and their relationship (Corbin & Straus, 2008). Already from the start of the field study, simple diagrams were prepared to visualize emerging concepts and their relations. It enabled the researcher to organize and better understand the data. Like the immediate reflections they supported the analytical process and guided further data gathering. The diagrams developed for the field study at KTH were quite simple as they are products of initial analysis as part of a larger research study.

## **2.5 Transcript Analysis**

The audio files of the interviews were transcribed using the transcribing software tool F4. This tool allowed the researcher to link both audio and text files (transcripts), which supported data analysis. Audio files, transcripts and immediate reflections were imported in Atlas ti, a software tool for qualitative data analysis.

Interview transcripts were coded, using open coding (Corbin & Strauss, 2008; Myers, 2009). During coding, interpretive conceptual labels are put on blocks of raw text. The coding was based on codes derived from the main research question, and themes and issues identified during the interviews and recorded in the immediate reflections. Additional codes were added during the analysis of the transcripts, when new themes or issues were identified or provided by the respondents (in-vivo codes). The advantage of using in-vivo codes was that the concepts stay as close as possible to respondents’ own words or because they capture a key element of what was being described; like for example ‘the international students’ or ‘the Swedish system’ in this field study.

The text blocks, or quotations, attached to the codes were analyzed for the ideas and concepts contained within. Together with the ideas, and concepts generated in the immediate reflections and the diagrams, this resulted in the outcome of the field study presented in chapter 3, Profile KTH and the LM Program, and chapter 4, The meaning of student knowledge.

## **3. PROFILE OF KTH AND THE MASTER OF SCIENCE PROGRAM IN LAND MANAGEMENT**

The setting for the research is the International Master of Science Program in Land Management, the LM Program, offered at the Royal Institute of Technology (KTH) in

Sweden. In this chapter the context of the program will be described starting with an introduction to the university, the history of the program, its aim and objectives, student target population, course development and teaching approach, structure and courses, and the role of SIDA.

### **3.1 The University**

The Royal Institute of Technology (KTH) in Stockholm is the largest, oldest and most international technical university in Sweden. Education and research spans from natural sciences to all the branches of engineering and includes architecture, industrial management and urban planning (KTH, 2013; KTH, 2014). The university consists of three campuses spread over Stockholm. The main campus is located in central Stockholm since 1917 (KTH, 2014).

The LM Program was offered by the Department of Real Estate Planning and Land Law; now one of the four Divisions of the Department of Real Estate and Construction Management. The Department is part of the School of Architecture and the Built Environment. The Division of Real Estate Planning and Land Law engages in teaching and research on how rights associated with land use and real property can be established and/or adapted in order to facilitate desirable societal development(KTH, 2014).

### **3.2 History of the LM Program**

The Master of Science Program was part of a larger program in capacity building in Land Management supported by the Swedish Development Cooperation (Sida). The two additional phases of Sida's Land Management program concerned a University Support Program and PhD-studies in Sweden, and the development of new training programmes in the target countries based on the Master of Science Program offered by KTH.

The Sida program developed after the collapse of the former Soviet Union around 1994. In Eastern Europe and former Soviet Union, there was an urgent need for capacity development in providing security of tenure and facilitate the development of land markets in connection with privatization of land and buildings. The government of Sweden therefore decided to support the development of land administration institutions in former socialistic countries (Land& Österberg, 2013). This support was mainly channeled through Swedesurvey, the overseas agency of Lantmäteriet (the Swedish mapping, cadastral and land registration authority) and funded by the Swedish Board for International Cooperation and Technical Support (BITS).

The first ambition was to train officers that were made redundant after the rapid decline of the Soviet army, in order to find alternative occupation for them as professionals in land management. This first training was implemented by Swedesurvey. It was soon realized that the educational institutes in Russia did not provide adequate education for the new situation in society. KTH was then contacted by the Swedish Development Cooperation to design a Master of Science Programme in Land Management, in the various fields that were missing in

the supported countries' existing training programs, such as real property planning and implementation, real property law, transparent procedure to handle privately owned land, real estate economics and information technology (Land& Österberg, 2013).

The Master of Science Program in Land Management was from the beginning financed Swedish Development Cooperation, first by BITS and later Sida, through the programmes EUROPE (former Soviet Union), NATUR (Balkan) and URBAN (East Africa). The students from Ethiopia were financed by Sida Amhara Rural Development Programme (SARDP). In addition to this Sida supported group, five students from other countries participated in the training through Tempus or Swedesurvey funding (Land& Österberg, 2013). In 2012 Sida withdraw its funding to the Master of Science Program in Land Management as a consequence of changes in the Swedish Development Cooperation policies. Attempts have been made to continue without Sida funding, however these were not successful and the LM Program came to an end.

### 3.3 Aim and Objectives

It was difficult to find a consistent description of the aim and objectives of the LM Program. In box 1 the aim and objectives are presented as these were found in the consulted documents. The first 'objective' as presented in the course flyer are quite general expressing the aim of the program; the 'objectives' as found in the Study Programme of 2009 are more specific, indicating expected learning outcomes and how to achieve these.

The objective of the program is to train the students to be able to assume leadership positions in the land administration sector. In order to achieve this, graduates are expected to be able to identify and comprehend a variety of perspectives on how land can be viewed. An understanding of the importance and necessity of well-developed institutions to ensure that land and natural resources are put to good effect is also a goal of the program.

*KTH brochure, Land Management Track (undated)*

The program shall give enough competence for analysis and solving of complex problems within "land management and cadastre" with special emphasis on "land tenure rights". The students shall also learn valuation with emphasis on real property valuation for taxation purposes and its connection to cadastre systems. To reach this goal, the teaching shall give the students knowledge of fundamental property formation methods and systems with connection to juridical, economical and also to technical property register systems. Emphasis will also be put on the ability to integrate real estate planning with detail planning, environment, sustainable development and social and economic responsibilities.

The students will, after the studies at KTH, be able to introduce modern knowledge and thinking in their workplaces and in the educational programs at their universities.

*KTH, Study Programme Master Land Management, 2009*

Box 1. Objective(s) of the LM Program (KTH, undated, KTH, 2009).

The name of the program is expressed in different ways in the course documentation: Master of Science in Land Management, International Land Management Program, Master Land Management, Master of Science Programme in RealEstate Development and Financial Services, Land Management Track. In conversations with KTH staff they always talked about the 'LM Program'. Therefore and because of reasons of consistency this is also adopted in the paper.

### 3.4 Target Student Population

The LM Program was targeting the following groups of land professionals: 1) professionals working at authorities within the land management and cadastre sphere and 2) (assistant) lecturers at universities within the surveying and land administration field (KTH, 2009). These were all young and mid-career professionals.

At the start, the international LM Program focused mainly on students from the Baltic countries and the North-West region of Russia. The number of countries was expanded to include more countries in Eastern Europe, Caucasus and Central Asia. Another few years later, in 2003, countries in the Balkan region joined, and from 2004 there were students also from Ethiopia. In 2006, students from Eastern Africa were also included. As the Master of Science Program in Land Management was part of a Sida funded program, Sida decided on the target countries.

All students when arriving had completed a Bachelor's degree in one of the following fields Land Surveying, Land Administration, Jurisprudence, Economy or Computer Science or corresponding qualifications. Applicants with bachelor (or equivalent) in Economics or Computer Science could only be accepted if they had at least two years of work experience within the field of land management.

The students were selected on the bases of tests and personal interviews in their home countries to ensure that: a) students know English well enough and b) students were working in the field of land management and were aware of the tenure concept (Land& Österberg, 2013). As part of the selecting procedure the program manager and/or program administrator held interviews with potential students and their employers in the home countries.

The LM Program started in 1996 with 30 students; later this increased to 56 in the last batches. Students from 25 different countries attended the LM Program. In all, 13 batches composed of a total of 505 students, of which 500 were financed by SIDA, have been educated at KTH (Land& Österberg, 2013). The gender distribution among the Sida supported students was almost equal, 252 men and 248 women.

The total outcome, where 72% of the students have finalized their studies with approved grades, is considered a good result, comparable with other master students at KTH. The regional differences were notable, with the best results from Ethiopia and other African countries, and the poorest from former Soviet Union. Possible reasons behind this according to the course management can be language difficulties, lack of support and motivation from



the home organization, and the conceptual differences and traditions in regard to land use rights (Land & Österberg, 2013).

### 3.5 Content Development

According to the program director, they started the program based on what they thought was needed to overcome the identified capacity gaps in land management in the former Soviet Countries. No formal training needs assessment had been conducted, the program developed in the form of ‘learning by doing’, stated by the program director. Development of the program was based on discussions among staff on what is important, which courses are then needed and what should be lectured in these courses.

However, some concepts and theories were fundamental in shaping the LM Program. The concept Land Management was defined as ‘the process of managing the use and development of land resources’; the closely related concept Land Administration as ‘determining, recording and disseminating information of ownership, value and use of land’ (Mattsson, 2009).

The LM Program promoted and was built on the theories of the economist Hernando De Soto. De Soto has shaped current thinking on land registration and in particular in promoting its positive impact on the lives of the poorest in the world. According to his theories (De Soto, 1990, 2003) legal security of land will stimulate investments and improvements in land and support economic development of the individual land holder and the society as a whole.

In line with De Soto’s views is ‘the theory of dynamic land law’ (Mattsson, 1997). This theory was according to the author and the Program Director, an important guiding principle for the program development. The theory is characterized by three interrelated ‘pillars of land management’: the transfer of property rights, property formation and alteration of land use (Mattsson, 1997). The legal system should facilitate changes in land rights, rather than impede them, in order to support land development. This requires a dynamic land law system.

### 3.6 Teaching Approach

Program documents, KTH (2009), Land & Österberg (2013) and the LM program’s website, do not mention explicitly a particular teaching approach applied. The program director explained it was not required; it was not a normal procedure to have it. Lecturers decided by themselves, depending on their courses. The concept ‘teaching approach’ in its theoretical sense does not seem to have been an issue in the development of the LM Program. At least, not an aspect that required exploring higher education theories, upon which a justified decision for a proper approach could be made for this particular course. It was not made explicit in any of the reviewed program documents.

The program director, however, mentioned that the program was developed based on a clear philosophy. It was assumed that students from former communist countries lack complete knowledge of a market economy and should, so to say, be trained from ‘scratch’. The Swedish cadastral and land registration system was taken as the basis for the training; it was

considered an example of an excellent legal system. The principles of a market economy and related land management aspects, it was further argued, could best be learned by comparing and contrasting the Swedish situation with the situation in students' countries of origin. The teaching methods applied in the program supported this philosophy. This way of achieving the learning outcomes can be recognized in most of the courses given and the thesis work of the students. The interviews with the individual lecturers confirmed this thinking. In figure 1 the teaching philosophy of the LM Program is illustrated.



Figure 1 The 'teaching philosophy' of the LM Program at KTH: bridging the gap.

The LM Program was based on Swedish experiences and practices, such as the Swedish Law System and the Swedish Cadastre. Lecturing staff interviewed were all Swedish, and all had quite some professional experience in Swedish practice (Law, Cadastre, Real Estate Market, Municipalities). Teachers combined their academic tasks at KTH with consultancy or advisory work. The university and the activities of the department have a close link to Swedish practice and business, such as with Lantmäteriet and Swedesurvey.

Content of the lectures were based on what the lecturers called 'the Swedish system'. However, they were aware that it does not make sense to teach the international students in the same way as the Swedish students. Therefore they focused their lectures on the 'principles' behind the Swedish system and compare and contrast these with their countries realities. International exposure came from lecturers outside Sweden, with similar advanced legal systems, and cadastral and land registration systems, like for example The Netherlands.

### 3.7 Structure and Courses

From 1996 till 2007 the LM Program had a length of one and a half year: one year education at KTH in Stockholm followed by half a year of thesis work in the student's home country. From 2008, the program was extended to two years, of which one and a half year comprised of courses at KTH. One of the reasons for the prolongation was to adapt to a similar change of other MSc programs at KTH, based on the European standard for academic master programs (the Bologna agreement). English was the teaching language. All courses were in principal mandatory (KTH, 2009).

The two year's program was composed of three semesters of course work (90 credits) and one semester of Master's project (30 credits). The Master's thesis project was carried out in the student's home country. The thesis project was undertaken in one of the following disciplines: Real Estate Planning & Land Law, Building & Real Estate Economics and Geo-informatics. In the earlier editions of the program, the degree study was only possible in Real Estate. The

thesis was defended at KTH when finalized. Students who successfully completed the LM Program were awarded a "Teknologie masterexamen", translated into English as "Degree of Master of Science (two years)" (KTH, 2009).

During the years the program has been constantly changing. Staff had quite some freedom in this. Courses were reshuffled, split in two or more, new courses were added and the content of the courses changed. This process of change was driven by growing insights in the needs of the students, new countries participating in the program, and the Bologna process. The prolongation of the LM Program in 2006 made it possible to extend the course contents, especially in fields such as real property formation, cadastral mapping, real property economics and valuation, and scientific research methodology. Later the courses urban land development and geo-informatics were added. All changes had to be approved by Sida.

### **3.8 Summary**

From 1996 until 2012, the Department for Real Estate Planning and Land Law at the Royal Institute of Technology (KTH) in Stockholm, Sweden, offered an international Master of Science Program in Land Management for students from Eastern Europe, Central Asia, the Balkan region and Eastern Africa. It was not a regular program at the university, but part of a larger program in Land Management financed by Sida. Sida had a major impact on the program, because of financing of the program and student fellowships, their role in selection of target countries, supporting the field interviews, input and approval of program and course content and changes. The Swedish system, Swedish teachers and Swedish professional organisations played a key role in the development and implementation of the program. In the university, the program director and teachers had quite some freedom to develop the program of the Master of Science in Land Management. Through 'learning by doing' the program changed and improved over time. Crucial for the program was the role of the program director. He played a key role in the start, development and implementation of the program.

## **4. THE MEANING OF STUDENT KNOWLEDGE**

### **4.1 What a Strange Question**

As part of the research, eight in-depth interviews were held with staff involved in the Master of Science in Land Management. The initial idea was to open the interviews with the question: to what extent do you benefit from students' knowledge for disciplinary knowledge development? But surprisingly this did not work in test interviews with colleagues and confirmed by the first interviews at KTH. It appeared that in first instance some lecturers did not understand question: it was kind of unexpected and 'unbelievable', in the sense that 'how can you ask a teacher, who is supposed to teach students about a certain topic, what he or she learns from students about that topic'. The question about student knowledge and teacher learning from their students was further interpreted from a didactic perspective. The respondents made the relation to their teaching and what it means for their teaching practice and how to improve it.

Therefore it was decided to start the interviews with a more open question allowing the respondents to talk about all aspects of students' knowledge and its meaning for their teaching and academic practice. The emphasis on the relation between student knowledge and teacher content learning was brought into the conversation at a later stage. Even then some respondents could not believe this was a serious question as the next conversation shows:

I. *If we look at the content of your field of specialization, Land Information Systems, can you say that you can learn from your students? Content-wise?*

R. *I mean... What do you mean...?! Learning the content?*

So the interviews started with the question: 'what does it mean for you to teach the students in the international Master of Science in Land Management?' This chapter will continue to present the answers and the analysis of findings.

## 4.2 Teaching International Students

In answering the above question, the lecturers involved in the LM Program at KTH in first instance focussed on the meaning of teaching international students. The LM Program was a special program for the lecturers; it was not a regular program at the Department. The lecturers were used to teach Swedish students. So the first responses related to their experiences of lecturing in this, for them, special and international program, of lecturing international students (figure 2).

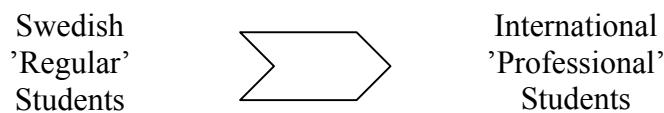


Figure 2 What it means to teach in the LM Program: the main challenge.

Teaching the international students in the LM Program appeared to be quite different for the lecturers than teaching their regular Swedish students. In particular in the beginning of the program they were confronted with this and realised the difference. Through the interaction with the first students batches the teachers became aware that what they were used to do with their regular Swedish students did not fit the international students in the LM Program.

This difference in student population as compared to the Swedish students made it challenging to teach students in the LM Program. It was more difficult for the lecturers, but on the other hand it was also more interesting and rewarding to teach the international students, as is shown in the following quotations:

*It is, it makes it more interesting...and more difficult, challenging it can be as well.*

*But, it was hard, actually too, it is harder to teach in this, for these students. But, on the other hand it gives you quite a lot in return. I have fortunately met many nice students, you know, very nice and thankful and all this.*

Given this fact, what in particular made it so challenging to teach the international students? In the following sections the several related dimensions will be explored.

### **4.3 The Challenge of Teaching in English**

Teaching international students involved some challenges in particular at the start of the program. One of these challenges was the fact that lecturers had to teach in English. Lecturers were used to teach Swedish students only and now they had to teach in English. And, although Swedish lecturers normally master their English, this posed some serious problems:

*For me it was difficult. First, because it was the first time, because, you are so focussed on trying to teach a few key ideas and also trying to master the English vocabulary.*

Next to teaching language, the course materials had to be made available in English. For some courses this was not easy due to the nature of the course content, such as in law courses:

*I think also the first time, it was the first time I had a course in English, I also realised it is extremely difficult to communicate, when you have different languages, I mean, it is probably in many areas, but law it is particularly national discipline. I had to write a book, for the course, on mortgages, and just to translate the word mortgage, it is hopeless!*

Having to teach in the English language was one of the first challenges the lecturers in the LM Program felt confronted with. They had overcome this barrier in order to be able to teach, to prepare their lectures and make lecture materials available to their students.

### **4.4 Students' English proficiency**

Not only for the lecturers English was a barrier for the communication and learning, also students' proficiency in English was an aspect that had to be taken into consideration in the teaching practice. Although students were required to have a certain level of English skills, not all of them entered the program with sufficient language proficiency. This was considered a barrier for the lecturers in their communication to the students.

*And then if they were too bad in English it was difficult to get in contact and they became shy. And that has nothing to do with nationalities or from where they come. But just that it may cause worry.*

*And, I mean, for most students, most students were proficient enough in English, so there wasn't really a problem, but there were a few. I am not sure I handled it in the*

*best possible way. I mean, it is so difficult, that you hardly can speak to each other.*

In particular in the first years of the program language was a major problem for the students from the former Soviet and Balkan countries. One lecturer even made use of an interpreter to translate his lecture from Swedish into Russian. In later years the level of English of the students improved, and in particular when the Eastern African students joined the program.

#### **4.5 Students From Many Different Countries**

Used as they were to teach Swedish students, the different country and related cultural background of the students posed a challenge to the program and the lecturers. The Swedish students are quite a homogenous group and the teachers were used to teaching them. Now they had to teach students from many different countries that they are not familiar with. Most lecturers were aware of the importance of relating their teaching to the background of the students. For one of the lecturers it was even frustrating not having the opportunity to familiarize with the students' country background before starting teaching:

*...but me I was not involved when we started in 1996, we had actually interviews the students. And I was not involved in that process 'I did not know, I had no idea, in the beginning, what kind of background students had. But, when you know, you can change; you try to change your presentations or your lectures in way that they can be more interested for a bigger group. Or you try to relate, if you can, try to relate to their home countries. I think, then you can have a better dialogue because they find something they are familiar with and then we can discuss.*

The LM Program was based on Swedish experiences and practices, such as the Swedish Law System and the Swedish Cadastre. This was also the domain of the lecturers and their course content. Next to the fact the lecturers, all of them were Swedish, used to teach Swedish students, their course content was based on the Swedish system. Initially this was also the course content for the international students in the LM Program. However the lecturers soon realised the course content had to be adapted to fit the international students in the LM Program as is illustrated by the following respondent:

*From the beginning, actually, during these years I got some new courses. You always take quite a lot of time to develop those courses. And you do the next year. It is the same for the Swedish courses. In the LM is it more difficult, because you have to really consider, you have to consider, you have to actually talk about principles, not too much about details and of course, it is always difficult to teach in another language.*

#### **4.6 Students Different Study Behavior**

At the start of the LM Program the lecturers were confronted with unexpected problems related to the students' different cultural background, as compared to Swedish students, with respect to learning behaviour and their relation to the teachers. Students from the former Soviet Union were used to cheating and 'copying and paste' for their assignments. They were not used to take part in discussions, to challenge the lecturers, to think independently and how

to solve problems by themselves. The lecturers were not prepared nor made aware of that students from other countries could have different study behaviour.

*We have some really problems in the beginning, we were not used to, we couldn't expect what happened when we had exams, we had some problems.*

*It was... Sometimes, it was also difficult, culture difficulties. Or you had the problem of free-riders, or students not taking part, and so on. That were also things we had. I mean, it worked quite well I would say, but you had to be aware of those things.*

During the LM Program students were challenged to participate in discussions, exchange ideas, make presentations in public, and defend their views. However, not all the international students were used to this kind of teaching practices.

*Yes, but they have difficulty in participating in discussions, many of them they were brought up in totalitarian systems, where they have difficulty to speak, you could try, you get a few words, but sometimes it was very difficult to communicate ideas.*

Within the LM Program quite some attention was paid to plagiarism. At KTH this was an important issue, with a special program and booklet. However, for students from certain countries attending the LM program the issue of plagiarism seemed to be a common practice.

*I think, it is, you know, here when we writing a thesis we were faced with very different traditions, in some countries it was, actually, it was oke, to copy and paste and so on. And I think it is very difficult, if students are raised by a certain tradition, I think it is quite difficult to change that tradition.*

When the African students joined the LM Program the lecturers noticed a different learning attitude as compared to the students from the former Soviet Union. African students were more motivated, better educated than the Eastern European and Asian students, and their English level was higher.

#### **4.7 Diversity in Educational Background**

A typical aspect of the students in the LM Program was the difference in educational background. Students could be trained as surveyors, lawyers, economists or planners. So the program manager and the lecturers had to adapt their courses to this much more diverse student population than they were used to.

*For us it means, it is on a planning level of the program. We know that they have a different background, surveyor, lawyer, and then we have more some economists. So, we had to plan our courses, how to say, from a common platform. And it means, in some course, for example land information systems, for some students with surveying background, some parts of that course is already familiar for them, and to others for instance economists and lawyers, it could be a new experiences.*

This diversity made teaching more complicated as the lecturers had to find a common ground for their courses so that all students could participate more or less equally. One lecturer enjoyed the fact that some students, in this case in a law course, were educated as lawyers and he could really talk on the same professional level.

#### 4.8 Students with Professional Working Experience

The students in the LM program were different from the Swedish students in the sense that they had working experience and diverse professional background. They worked as university lecturers or as officers at ministries or land departments, cadastres or land registries. The lecturers were not used to this kind of students, but were aware that they had to adapt their courses and teaching methods. This how one of the lecturers explained it:

*Their understanding of what I am saying is based on their own experiences; you have to try to twist it, to make them explain how they see the problems.*

#### 4.9 Summary

The teachers involved in teaching students in the LM Program in first instance were faced with international students and an international program. This is considered to be both difficult and interesting, involving some major challenges to be overcome. The matrix in figure 3 gives an overview of the challenges of teaching the students in the international LM Program, as outcome of the first level of analysis.

Teaching international students	
Challenges	
The language of communication	Lecturers' English proficiency Students' English proficiency
The diversity of the student population	Students from many different countries Students different study behaviour Diversity in educational background Students with professional working experience

Figure 3 Matrix summarising the meaning of teaching in the LM Program: the challenges of teaching international students.

### 5. DISCUSSION AND CONCLUSION

LM Program is an example of an international postgraduate program offered in the framework of development cooperation (Groenendijk, 2010). However KTH is a regular university and the lecturers were used to teach the Swedish students. Teaching the international students in the LM Program was experienced as challenging and sometimes difficult, but also interesting and rewarding.

The outcome of this first round of analysis of the field study at KTH is in line with general findings on teachers' experiences in international higher education and the challenges this



involves. Internationalization, globalization and cross-border education has made that international education has become a central institutional issue with strategic importance for many universities (Groenendijk, 2010; Larsson& Boud, 2005; OECD, 2007;Teichler, 2004, and Van der Wende, 2001). Consequently a stream of reports and scientific papers have been produced that supports the internationalisation of higher education, what it means for academic teachers and how they should respond (Catteeuw, 2008; Dewey & Duff, 2009; Joy & Kolb,2009;Robson & Turner, 2007; Teekens, 2004, and Valimaa& Ylijoki, 2007).

What is more interesting about the research at KTH is that the challenges the lecturers were facing resulted in teacher learning and were of crucial importance for the development of the international LM program and the individual courses. As stated by the program director, program development was based on 'learning by doing'. The LMProgram evolved and improved over the years. This learning involved content development, adapting the teaching approach and teaching methods to the international student audience. For a large part this was based on teacher learning in interaction with the knowledge, experiences and skills the students represented.

Another theme emerging is that teachers became aware of the relative importance of their own, Swedish, system of Land Management and Land Administration. In fact it broadened their mind; exactly what they intended to achieve among their students.

## 6. FURTHER RESEARCH

The paper presented the profile of the LM program and the outcome of the first analysis of the data obtained during the interviews with the lecturers at KTH. Interview transcripts need to be further analyzed to complete the first level of analysis focusing on the dimensions "interesting and rewarding" of teaching international students. This will be continued by data analysis zooming in on student knowledge and teacher learning (what, why, when, how, who) and in particular on disciplinary knowledge development. In addition an analysis of the Master Theses (about 500) could give valuable insights. The KTH field study will eventually result in a set of concepts, dimensions and properties that will guide the next round of data analysis of the second field study conducted at the Technical University Munich (TUM).

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## **BIOGRAPHICAL NOTES**

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