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Assessing and rewarding excellent academic teachers for the benefit of an organization

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In this article we describe and analyse a system for rewarding excellence in university teaching developed at the Faculty of Engineering at Lund University in Sweden. Individual teachers are rewarded for the effort they invest in the support of student learning. However, it is the organization that establishes a reward system and it does so for developmental purposes. These two purposes, individual and organizational, need to be balanced but the organizational perspective is wide enough to host the individual perspective, especially if the individual teacher contributes to the overall development at institutional level. The Faculty of Engineering rewards teachers with a clear focus on student learning and a developed capability to reflect scholarly on their teaching practice. The balance between theoretical knowledge about teaching and student learning and the actual teaching practice is crucial and examined in detail. It is the reflected practitioner that is rewarded – for the benefit of the organization.

Keywords: teaching excellence; reward system; organizational development; teaching portfolio; assessment of teaching excellence; impact of reward systems; transferability of reward systems

Introduction

This article describes and analyses a system for rewarding excellence in university teaching developed at the Faculty of Engineering at Lund University in Sweden. A process covering more than 12 years is examined and the present article is based on several investigations and conference papers presented over the years (Lund University – Faculty of Engineering 2005; Antman and Olsson 2007; Olsson and Roxå 2008, 2012; Olsson, Mårtensson, and Roxå 2010).

Lund University is a large, old (founded in 1666), and research-intensive university with 47,000 students and more than 6000 employees. The university is divided into eight faculties, each with significant independence in relation to the central university leadership. The Faculty of Engineering (LTH) was established in 1961, and is the largest faculty of the university with 9600 students and 1500 employees. For two decades, LTH has worked purposefully and systematically with different measures to develop and reward teaching and student learning in engineering education.

Important initiatives to increase the status and quality of university teaching during the last 20 years stem from the Scholarship of Teaching and Learning

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movement, originating from North America (Boyer 1990) and the Teaching Quality movement, mainly from the UK and Australia. Chalmers (2011) has reviewed these initiatives to raise the status of teaching at universities and also discusses other existing practices and evidence of change. This literature drives the assumptions underlying the LTH approach. For example, Ramsden and Martin's (1996) review of reward systems in 32 Australian universities found that these systems emphasized formal reward processes, with clear criteria defining what is meant by good teaching. Such processes also included promotions, were considered important among staff, and used existing academic cultures associated with research as a starting point. For instance, peer review and portfolios were preferred – research-based approaches in contrast to 'unskilful administrative uses of student ratings.' Ramsden and Martin also found that only 47% of universities used any assessment criteria at all and more than half relied on student feedback as the only source of evidence. Research and scholarship were used as a criterion in 25% of the investigated universities. In addition, there were considerable discrepancies between what universities declared about the importance of teaching and what they actually did, and discrepancies between the value teachers gave teaching and the value they actually experienced by the universities. Ramsden and Martin (1996) summarize their study with change strategies that narrow the gap between university policies and teachers' perceptions, use criteria and valid assessment methods, prepare award or promotion committees properly, and use procedures embedded in recognized academic cultures.

Ten years later, Chism's (2006) examination of 144 teaching awards at 85 United States institutions found similar results. Less than half of the investigated award programmes used specific assessment criteria, and when criteria existed they focused on communication skills, organization, and high standards. Only 15% used Scholarship of Teaching as a criterion, demonstrating how little importance was placed on scholarly aspects of teaching and learning. Nomination letters is by far the most commonly used evidence (92% of the programmes). In fact, 32% of the programmes use recommendation letters as the *only* source of information about candidates. In most programmes nothing was stated about the nature of evidence expected and few programmes specifically matched criteria and evidence. Chism's recommendations include being clear about criteria, linking criteria and evidence, and being explicit about standards – important aspects also stressed by many other researchers (McAlpine and Harris 2002; Gibbs 1995; Kember and Kwan 2000; Thompson et al. 1998; Casey, Gentile, and Bigger 1997).

Chism's and Ramsden and Martin's work point out that it is important to be clear about why, in the first place, we want to reward good teachers for their engagement and accomplishments. Also important to consider is who should be rewarded and why. It might appear natural to reward individual teachers for their achievements in teaching, preferably as measured in student learning and personal development. It appears tasteful since many academic teachers are doing great things with and for students without being acknowledged in an environment where research tends to be treated as more important for tenure and promotion. However, without neglecting individual teachers' hard work and commitment towards students, it might be important to focus on why such reward systems exist from an institutional or organizational perspective.

The first perspective, a focus on individual teachers, is anchored in a belief that academic teaching is an individual enterprise, driven by individual teachers'

commitments. Here it would make sense to reward those who are doing a good job. The problem is how to build processes and assessment procedures so that the right individuals can be rewarded. The institutional perspective views teachers as part of an organization or a collegial community. Teaching is linked to organizational and cultural aspects which in turn enable the teacher and provide support (or not) for teaching. There is a growing body of literature emphasizing teaching as a context-dependent activity. Trowler, for instance, stressed teaching and learning regimes as socially constructed traditions that affect individual teachers' resources, thinking and practices (2008). Roxå and Mårtensson (2011) have described micro cultures that influence teaching decisions in academia. Ginns, Kitay and Prosser (2010) have described how long-term outcomes of pedagogical courses are influenced by the working context of the participants, and Gran (2006) has shown that the environment can support staff development activities.

Evidence thus suggests that academic teachers are connected to, and to a varying degree, dependent on their respective professional and organizational contexts. Consequently, any reward schemes must be connected to the organizational context. On the other hand, the individualistic perspective is not irrelevant. Teachers should be individually rewarded for the effort they invest in the support of student learning, but it is the organization that establishes a reward system, and it does so for developmental purposes. From the individualistic perspective it might be sufficient to show how the teacher has made a difference in students' knowledge and skills. From the organizational perspective, the evidence must go beyond the classroom or course to show how the teacher has contributed to the overall organizational development. How this can be done, and maybe more importantly, to what degree this contribution should be valued, is something the organization has to monitor continuously, since the value of contributions are dependent on the characteristics of the organization (Roxå, Olsson, and Mårtensson 2008).

Aims of the reward system

The Pedagogical Academy at the Faculty of Engineering (LTH) at Lund University was developed with regards to the literature on perceptions of quality teaching in higher education (Boyer 1990; Barr and Tagg 1995; Elton 1998; Healey 2000; Knight 2002; Kreber 2000, 2002; Trigwell et al. 2000; Trigwell 2001; Trigwell and Shale 2004; Prosser and Trigwell 1999; Abrahamsson 2001; Fransson and Wahlén 2001). The Academy was first and foremost established to raise the overall quality of teaching and student learning at the institutional level by rewarding excellent teachers *and* their departments. This aim is supported by measures to stimulate pedagogical development with a clear focus on the systematic improvement of teaching. For example, teachers that meet specific quality criteria are recognized as having achieved a high level of pedagogical competence and are rewarded by an increase in salary. Teachers document, analyse and critically evaluate their teaching ideas and methods and the learning of their students, so that the results can stimulate further development. The assumption is that rewarded teachers will continue to contribute to pedagogical development at departmental and institutional levels through active participation in the local pedagogical debate and development at LTH (Ashwin and Trigwell 2004) and by acting as mentors for younger teachers.

The departments of rewarded teachers receive additional funding for every teacher who is admitted into the Pedagogical Academy. As a consequence other departments will suffer a decrease in funding, thus emphasizing that teaching and learning is emphasized and invested in at the institutional level. Departments that actively support teachers in the development of their teaching skills will probably find it easier to recruit and maintain good teachers and, as a consequence, better students.

LTH's Pedagogical Academy

Teaching portfolio

Teachers apply to the Pedagogical Academy. This application is based on a peer-reviewed teaching portfolio related to knowledge about teaching and student learning. The teaching portfolio consists of a personal document where the teacher presents his or her teaching philosophy (reflections about teaching and student learning), together with integrated examples from their teaching practice. The presentation and assessment of pedagogical qualifications using a teaching portfolio has been established in other contexts as well (Seldin 1997; Apelgren and Giertz 2001; Giertz 2003; Magin 1998; Ryegård, Apelgren, and Olsson 2010). This portfolio should provide insight into how the teacher sees the relation between teaching and learning in relation to his or her teaching practice, and should reflect the personal teaching philosophy in relation to theoretical aspects about teaching in higher education. Integrated examples, described and analysed to show how and why different teaching measures were introduced, are fundamental and indispensable parts of the portfolio. The practical teaching examples, accompanied by evidence of outcomes, provide insight into what the teacher considers to be especially important in relation to the teaching philosophy.

How a teaching portfolio at LTH might be written is illustrated by the example given below. This example shows how a teacher, after having discussed his teaching philosophy at the beginning of the portfolio, presents an example from his practice and how this practice developed based on observations of teaching and student learning together with theoretical reflections, and also some conclusions and further developmental changes:

In 2007 I was given the responsibility of teaching Packaging Logistics. My PhD thesis was entitled 'On the interactions between packaging and logistics' so I was very keen to teach students and was very confident about the subject. I also had insights into the course curriculum and the students' profiles and attitudes since I had been lecturer and supervisor in previous years. Given this background, my colleague NN and I questioned how students learned the subject; we saw a need to redesign the whole teaching- and student learning approach. At the time the curriculum was based on traditional lectures which 'inserted' knowledge, a class case study, a small project on a specific topic, and a traditional written exam at the end. We concluded that the quality of learning was not that of the higher levels of Bloom's taxonomy, synthesis and evaluation. Moreover, the quality of the project was relatively low since the project was 'school-like' where the students wrote about a specific topic and did not actively solve any real problems. In addition, the project was peripheral to the curriculum and not something which was assessed. Basically, the curriculum was acceptable but the student learning process was not. Hence, a new teaching- and student-learning approach was needed. We needed to generate an active learning environment.

To proactively achieve an active learning environment several student-centred teaching strategies are available. Project-based learning is one well-known example of an active learning environment which focuses on co-operative learning and learning through experiences (Solomon, 2003). NN and I quickly found that introducing project-based learning would make students more active in their learning process. According to Thomas (2000), projects need to focus on a problem drives students to encounter and struggle with the central concepts and principles of a discipline. To do this, we introduced projects where, in groups, students co-operatively evaluate and improve existing packaging systems from a packaging logistics perspective. In order to eliminate rivalry between project groups and instead facilitate communication and dialogue among all students, each project group was given a specific product, such as Danisco granular sugar or Star Wars Lego toy; all the products have unique supply chain requirements and requirements on their packaging system. By making students carry out a 'real' project in close co-operation with industry we aimed to actively involve the students and make them the drivers of an investigation.

The investment in introducing project-based learning paid off. Not only were the students more active individually, in project groups and in the class they also took on greater responsibility and a more active role in their own learning, as they were the drivers of the projects. Similar to Brush (2002), I also found that co-operative learning can improve student participation. In the project students constantly gain understanding of topics and concepts presented in lectures and literature, and evaluate whether these are applicable to their project problem. Within the project group students discuss the topics and concepts and jointly decide on what to apply to their problem, i.e. this illustrates co-operative learning. As the project is carried out in co-operation with industry, students also learn how to deal with reality, how to make contact with a company, how to overcome difficulties in collecting data, how to deal with lack of data, how to work in teams, etc. This result in students developing deep levels of understanding, as well as problem-solving and communication skills which help them in academia and in their future workplace (Thompson, 2007).

I would argue that the students' learning outcome resulted in high-level synthesis and application of the packaging logistics concept. I am always impressed by students' project results and find it fascinating how well they have carried out the project. Students come up with all kinds of creative and innovative ideas, from radical ones to simple and effective solutions. I often think that I would not have been able to solve matters as well as the students, i.e. they have surpassed their teacher! To communicate and share students' results I am in the process of writing a book where student results will act as illustrative case studies of the potential of packaging logistics.

When reflecting on the introduction of project-based learning, I see that the major aspect changed was not the curriculum itself, but the approach to teaching and learning. Similar kinds of lectures which were held before the introduction of project-based learning in 2007 were also held in 2009, but the aim of the lectures was not to 'insert' knowledge but to serve as input to the students' project. However, to support the introduction of project-based learning a change in assessment mode was needed (See section 3.2; Combining assessment modes). Moreover, a structured way to provide feedback to the students was needed to secure the development of the project (See section 3.3; Feedback seminars).

(From a teaching portfolio at LTH; written in English)

Note how the portfolio author, in the analysis of this specific example, starts from a problem in the teaching practice. The problem is identified by several observations of

teaching approaches as well as student learning achievements. The analysis, related to appropriate theoretical aspects, continues with an investigation of different strategies that could solve the problem. The investigation ends with conclusions and examples of improved student learning, also related to relevant literature citations. In each portfolio the teaching philosophy must be consistent with the teaching practice. The example below shows the beginning of a teacher's description of his teaching philosophy:

It would not be fair to say that I subscribe to a single outspoken teaching philosophy. Instead I have some basic ideas and beliefs that guide my approach to teaching and my interactions with students. These ideas and beliefs are based on thorough reflection and analysis of my experiences acquired in the classroom, and from designing courses and course material. They are also a product of the pedagogical training I have received, of the pedagogical literature I have read, and of the ongoing discussion with colleagues about teaching related matters. It follows that as my experiences change, and my pedagogical expertise evolve over time, so does my approach to teaching. Still, there are some underlying ideas that have remained, and that have been reinforced over the years. I consider these to be the foundation for my continuously evolving teaching philosophy. One such core idea is the importance of 'learning by doing' as a means to internalize knowledge, to really understand a subject, and thereby make it meaningful. Dewey (1938) characterizes 'learning by doing' as a process where the student [...] My belief in hands-on application as an important part of the learning process also means that I find theories concerning Experiential Learning (see for example Lewin [1942/1951] and Kolb [1984]) very relevant [...]

(From a teaching portfolio at LTH; written in English)

Note how the author reflects on the fundamentals of the teaching philosophy. It is based on reflection and analysis of classroom experiences, from designing courses and course materials, from pedagogical training and pedagogical literature, and from ongoing pedagogical discussions with colleagues. The reflection continues and as experiences change over time, so does the pedagogical expertise, and consequently the approach to teaching. The description ends with underlying ideas, underpinned with integrated theoretical aspects, forming a foundation for a continuously evolving teaching philosophy.

A teaching portfolio is especially relevant if we regard excellent teaching as 'documented achievement' (Magin 1998), allowing the teacher to link good teaching with assessment criteria (Ramsden and Martin 1996; Chism 2006). Finally, all examples of teaching practices, as with other areas of the portfolio, are supported by documentation or references (Lund University – Faculty of Engineering 2005). When a teacher applies for acceptance to the Pedagogical Academy, testimonials must also be included confirming that he or she has had discussions about the content of the teaching portfolio with at least two teachers, acting as critical friends (Handal 1999), who have already been accepted into the Pedagogical Academy. The critical friends are not required to assess the portfolio. The idea behind these discussions is to try to calibrate the standards and to improve the quality of the portfolio and to further develop collegial discussions.

Teachers at LTH are offered a course on how to write teaching portfolios. This course is given annually, and follows the ideas about teaching portfolios described in this article, though it is not connected to the process of acceptance to the Pedagogical Academy. Many teachers attend the course because they want to

increase their abilities to write a good portfolio when applying for a position or promotion.

Criteria

The criteria that the assessment for acceptance into the Pedagogical Academy is based on focus on three major areas: student learning, development over time, and a scholarly approach to teaching and student learning. In their teaching portfolio and during an interview, teachers must be able to describe, analyse, discuss and present information relevant to the following criteria (Lund University – Faculty of Engineering 2005):

- (1) Focus on the students' learning process
 - The applicant's teaching practices based on the learning perspective
 - The applicant's teaching and learning philosophy and teaching activities as an integrated whole
 - The applicant's practical teaching in relation to the students
- (2) Clear development over time
 - The applicant's efforts in his or her teaching, to consciously and systematically develop students' learning, and their ability to learn how to learn
 - The applicant's ideas and plans for continued development as a teacher
- (3) A scholarly approach
 - The applicant's reflections on his or her teaching activities using higher educational theory and knowledge of didactics relevant to his or her discipline
 - The applicant's search for and creation of knowledge concerning the students' learning process in his or her own teaching
 - The applicant's collaboration with others, the sharing of knowledge and experience in teaching and student learning through discussions, participation in conferences, publications, etc.

These criteria focus on the student learning process and on a scholarly approach to teaching and learning. They signal high expectations as they require substantially more than what is required for promotion or application to a teacher position. Further, it is very important, and it cannot be stressed enough, that it is the reflected teaching practice that is assessed. The teaching philosophy, reflections about teaching and learning in relation to the literature of higher education, could be excellent and be evidence for an outstanding degree of knowledge. However, if the teaching philosophy is *not* related to integrated examples from the teaching practice, it is of no value in this assessment – which is *an assessment of a reflected teaching practice*.

Over the years we have increasingly come to emphasize the importance of the teaching subject or subject area. This emphasis will result in the inclusion of new criteria, either as an additional area, or integrated within the existing criteria. This idea has been suggested in the literature. For example, in Shulman's (1986) discussion of subject matter content knowledge, pedagogical content knowledge, and curricular knowledge, there is an emphasis in each of context and subject matter area.

Assessment procedure

Applications to the Pedagogical Academy are made to one of two of LTH teacher appointment committees. The assessment procedure is divided into various parts. The most important piece of evidence is the teaching portfolio, which forms the framework for the description and reflected analysis of the teaching practice. The ten- to 12-page portfolio (pedagogical philosophy and integrated examples) includes examples of teaching practices, supported by testimonials, references or other documentation. The application also includes a recommendation from the teacher's department head, verifying that the teacher in question is an excellent teacher and has no shortcomings in his or her relation to students or colleagues. It is also in line with LTH's institutional policy to provide the department head with the opportunity to raise his or her own awareness of pedagogical competence within the department. It is part of the effort of LTH to make teaching quality and student learning an important organizational aspect. Finally, a CV with a section dedicated to the description of pedagogical activities is required, together with testimonials confirming the discussions with two critical friends.

All evidence (portfolio, recommendation, CV, and the testimonials) is evaluated by a group of teachers (the Assessment Group), who also interviews the applicant. These members of the Pedagogical Academy have undergone specific training in the assessment process. Appointed by the Teacher Appointment Committee, they, together with an affiliated pedagogical expert, perform the assessment and provide recommendations to the Teacher Appointment Committee. These recommendations are written as qualitative assessments against the criteria. The main parts of the portfolio are analysed and assessed in relation to whether they support a learning perspective, if there is clear development over time, and to what extent the teaching practice is based on a scholarly approach to teaching and student learning. Below is an example of such a recommendation that clearly indicates the formative nature of the assessment (note that the portfolio in question is of very high quality):

Assessment of NNs application

NN presents a very well-written and complex teaching portfolio with sophisticated reflections related to educational examples of very different characters – but always with student learning in the foreground. The portfolio deals with educational activities that reflect NN's different roles within LTH – teacher and academic leader – with a clear focus on the pedagogical process. NN's teaching philosophy is based on Kolb's theory of learning and he argues that 'learning takes place primarily when students perform some form of cognitive process in which information is processed, reworked and is given a new design.' Since the pedagogical practice involves several levels of the organization, the learning that is discussed in this portfolio affects not only students but also especially teachers, academic leaders and the organization as a whole.

The portfolio continues with examples that clarify the width as well as the depth of NN's extensive practice related to educational issues. At course level aspects of active learning are discussed in relation to lectures in the form of teacher-led step by step problem solving; development of screen casts, training videos available online; a course in applied water chemistry where the pedagogical approach is based on cooperative learning; and industrial cooperation in a course about mass transport. All examples are exemplary structured with analyses and problematizations about the pedagogical practice, observations and reflections of teaching and learning, as well as planning and further development. The degree programme in Environmental Engineering was launched, developed and implemented by NN and in the portfolio he presents interesting and

common pedagogical issues related to this extensive project. The same applies to CEQ, Course Experience Questionnaire, a summative evaluation system for student evaluations of all courses at LTH implemented by NN. A crucial argument for introducing the system was that it is based on higher education research and that it focuses on fostering a learning perspective. NN argues, for good reasons, that the CEQ system has contributed to the development of organizational learning at LTH and he presents an interesting model of the learning that takes place at different levels within the organization in relation to the evaluation system. The model is of widespread pedagogical value and the assessment group hopefully anticipates that NN will present and publish it in different contexts. Finally, NN discusses a project about the development of criteria for classification levels of courses. The guidelines that the project resulted in are quite unique for LTH since they contain a qualitative dimension that describes the complexity of knowledge formation and thus aim to influence the educational process. This deliberate attempt to support pedagogical development at institutional level can also be seen in the different pedagogical courses at LTH, in the reward system (the Pedagogical Academy), and the evaluation system (CEQ) and NN has been an important person involved, and a source of inspiration, in all these different contexts.

NN is a distinguished teacher and educator and the learning perspective is unquestionable and evident from the portfolio and during the interview. He presents a convincing, and since almost 30 years ongoing, educational development with ideas and plans for the future. The portfolio indicates a clear integration between theoretical aspects of university teaching and practical teaching activities. NN continuously examines the effects of pedagogical actions on student learning in a broad sense, and this work extends from formative evaluations during a specific course to the implementation of a summative faculty wide course evaluation system. NN collaborates with others and shares knowledge and experiences in teaching and student learning through articles, presentations in different contexts, and through a very successful educational leadership work at programme and faculty level. NN is confident about his own skills and abilities and this helps him to present, pursue and implement new and sometimes controversial educational innovations. This work is of great importance for improving student learning at LTH – for individual students, other teachers and the faculty as a whole.

The overall assessment shows that the complexity of the pedagogical reasoning, the theoretical capacity, is presented in a holistic portfolio that in all parts reaches a relational level, and the reflection within the pedagogical practice, the ability to reflect scholarly on teaching and learning, is exceptionally well developed, with extensive sharing of knowledge and experiences in the field of teaching and learning in higher education.

The Assessment Group's recommendations

By virtue of the above assessment, the assessment group recommends that the committee approves NN's application for admission to LTH's Pedagogical Academy. NN presents a teaching portfolio of outstanding quality. The assessment group trusts that NN continues his successful pedagogical activities with special focus on educational leadership and strategic organizational development. NN will remain an important academic leader with continued significant influence on LTH's successful development of teaching and student learning.

(Assessment of an application to LTH's Pedagogical Academy; translated from Swedish)

Note how the assessment starts with an overview of strengths and (not applicable in this case) weaknesses of the application. The portfolio is complex, with sophisticated

reflections related to practical examples of various characters. The teaching philosophy is described and analysed. The assessment continues with analyses of the educational practice, in this case at course level, programme level, and institutional level. Finally, an assessment against the criteria for acceptance into the Pedagogical Academy is presented. The learning perspective, the development over time, the integration between theoretical aspects and practical teaching activities, effects on student learning, and collaborations and sharing of knowledge and experiences with others are analysed and commented. The assessment concludes with a recommendation that the committee approves the application, including further recommendations to the applicant.

Teachers whose qualifications meet the criteria are awarded the distinction *Excellent Teaching Practitioner, ETP*, formalized in a certificate signed by the Dean of LTH. The teacher also receives an increase in salary, and his or her department will receive additional undergraduate teaching funds. Once awarded the distinction of ETP, a teacher cannot lose it. Just as the title of senior researcher is a life-time award (even if no more research ever would be conducted), it seemed natural that a teaching award should follow a similar pattern. However, the teacher is expected to continue to strive towards improved teaching practices. Apart from continuing to work on their own development, they should also act as advisers for other teachers contemplating application to the Pedagogical Academy, and as pedagogical partners in dialogues with others within their department. They should also contribute in other ways to vitalizing the pedagogical debate, and have the responsibility of spreading information on LTH's Pedagogical Academy. Furthermore, a lecturer who has been awarded the distinction of ETP may be called upon to assess future applications. The main aim of the Pedagogical Academy is to promote the development of teaching and learning at LTH. Those whose qualifications are not yet considered sufficient are encouraged to continue their efforts in teaching, with the focus on student learning, and to develop their teaching portfolio, with the aim of submitting a new application at a later date.

Assessment perspective – theoretical discussions

We have introduced a new concept, *pedagogical competence*, partly to illustrate the complex nature of assessing teaching portfolios and teaching qualifications in general (Olsson, Mårtensson, and Roxå 2010). The aim is to emphasize a developmental aspect rather than a specific level of competence. To become and to be an excellent teacher is a continuous endeavour rather than a fixed state. An illustrative model, presented in Figure 1, has been developed and presented elsewhere (Olsson, Mårtensson, and Roxå 2010; Olsson and Roxå 2012).

This model is based on several theoretical aspects (Olsson and Roxå 2012). Kolb's learning cycle (1984) is central, but also concepts such as conceptual change (e.g. Posner et al. 1982), cognitive dissonance (Festinger 1957), theories of reflection (Schön 1983; Mezirow 1991; Kreber and Castleden 2009), and espoused theories and theories-in-use together with single- and double-loop learning (Argyris and Schön 1974, 1978) are important.

At the core of the model are four essential characteristics of pedagogical competence – *pedagogical practice* or actual teaching activities related to student learning; *observation* of teaching and student learning; *theory* or theoretical

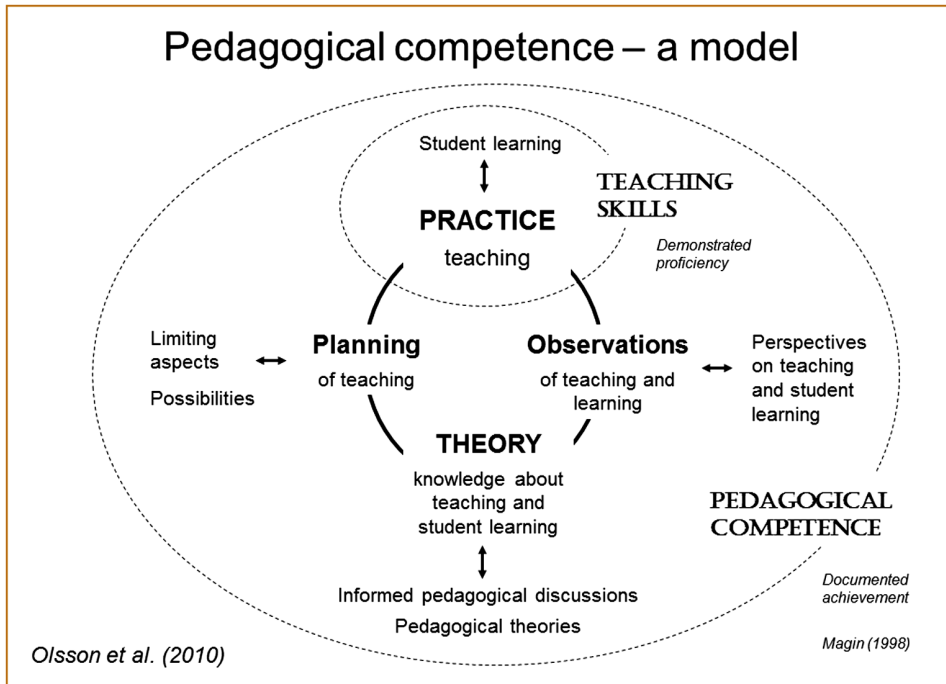


Figure 1. Pedagogical competence – a model.

knowledge of teaching and student learning; and *planning* as a means for improved pedagogical practice.

Pedagogical practice is indispensable and involves all kinds of teaching activities such as lecturing, experimental work, excursions, practices, supervision, and assessment. It is within the pedagogical practice that the teacher actively supports student learning through teaching. We identify the qualitative level of the pedagogical practice as *teaching skills*. Teachers' own *observations* of their teaching and their students learning is important if we want to develop and increase the quality of the teaching practice. What a teacher observes and how observations are interpreted is closely related to personal conceptions of teaching and student learning and to an emergent learning perspective. *Theoretical and personalized knowledge* about teaching and student learning is a fundamental part of a professional university teacher's expertise. This knowledge can be achieved through formal training in university pedagogy, but informed pedagogical discussions among colleagues are also important. A theoretical area of particular significance is 'pedagogical content knowledge' (Shulman 1986), which concerns theories about teaching a specific subject or subject area. *Planning* for higher quality of the teaching practice and the implementation of new ideas constitutes the phase where a new or developed understanding takes the form of a practice. This could be limited by framework factors, such as economy or programme design, but successful observations and theoretically underpinned reflections could also reveal new possibilities that would otherwise never even been considered.

We name the ability to move through the complete circular model – practice, observation, theory and planning – *pedagogical competence*. Such competence presumes that the teacher possesses broad, deep, high-quality knowledge of the subject of teaching and demonstrates an ability to use this knowledge in research-related, practical, pedagogical actions. As graphically illustrated, pedagogical competence is a broader concept than teaching skills (Figure 1), a distinction consistent with Magin (1998) in his discussions of ‘demonstrated proficiency’ and ‘documented achievement.’ Teaching skills, a central part of pedagogical competence, is demonstrated through teaching practice that actively supports student learning. Subject matter content knowledge, pedagogical content knowledge, and curricular knowledge (Shulman 1986) are critically important. Development over time is essential; consequently an excellent teacher continuously observes and reflects on the teaching practice and its effect on student learning. Based on theoretical knowledge and observations, the teacher analyses his or her teaching practice, draws rational conclusions, and make plans for continued development. Through this process, the teacher demonstrates pedagogical competence. These criteria are fundamental in the qualitative assessment of pedagogical competence. Within the framework there is also an overall assessment from different perspectives: from *theory* (theoretical knowledge about teaching and student learning, demonstrated by the complexity of pedagogical reasoning) and from *pedagogical practice* (the ability to reflect scholarly on teaching and learning, with the help of theoretical knowledge), and how well these perspectives are integrated with each other (Biggs and Collis 1982; Kreber 2002).

Figure 2 illustrates a model for assessing pedagogical competence (Antman and Olsson 2007). The model was developed within a research project that studied the first three application rounds of the Pedagogical Academy, and ties together pedagogical practice and theoretical knowledge about teaching and learning.

The model has two dimensions. *Theoretical knowledge* is developed from fragmented knowledge via more and more structured knowledge to an integrated

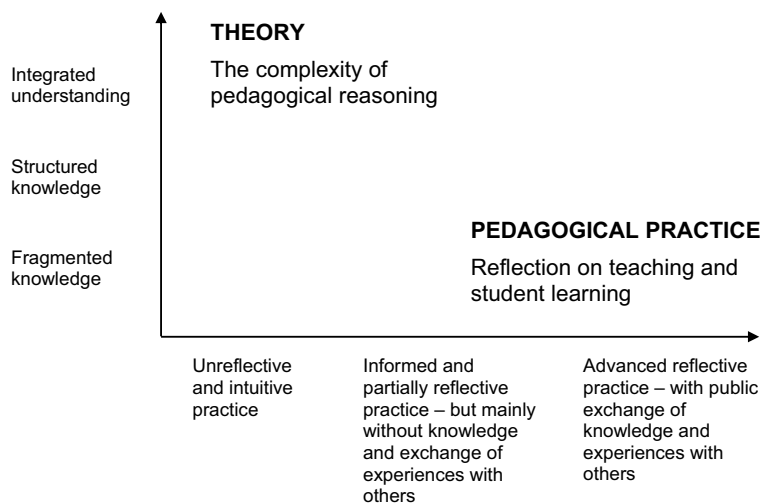


Figure 2. Overall assessment model.

holistic understanding. *Pedagogical practice* is a crucial and irreplaceable part of pedagogical competence. The ability to reflect on teaching and learning is central as pedagogical practice develops from being an unreflective or intuitive practice to being a more and more reflective and scholarly practice with increasing public exchange of knowledge and experiences with others. The assumption of course is that all teaching should support student learning and that learning depends foremost on the interplay between the teacher, the student and the subject. Teaching can be seen as an offer of support to the student (the learner) but there is not a straightforward correlation between pedagogical competence and student learning (Prosser and Trigwell 1999). A pedagogically competent teacher continuously develops his or her familiarity with the complexity of student learning, reflects upon and draws conclusions from student learning through observations and/or systematic investigations leading to refined analyses of student learning. It is the documented outcome of this process that forms the backbone of the assessment process in the reward system described here. Teachers who show that they approach their role as teacher in this way are likely to succeed in the process.

Development of LTH's Pedagogical Academy

The Faculty of Engineering started to offer pedagogical courses for its teachers in the beginning of the 1990's (Olsson, Mårtensson, and Roxå 2010). By the end of the decade these courses were so popular that the Dean allocated funding for a three-year academic development programme, including more pedagogical courses and consulting for all levels of LTH. The Dean also had an idea that the faculty should recognize interested and excellent teachers by forming a Pedagogical Academy. A working group, consisting of teachers from LTH and others with pedagogical expertise, developed a first version of a system for rewarding teachers. The first group of teachers, proposed by the Heads of Departments, were assessed and rewarded in 2001. By 2003 LTH had gained considerable experience in rewarding teachers but problems and questions needed to be investigated further. By this time LTH had a new Dean and she decided that no teachers should be accepted into the Pedagogical Academy before the system had been thoroughly researched. A research project was launched as a cooperative project between teachers/researchers at LTH and educational researchers from Lund University (Antman and Olsson 2007). The project resulted in a new version of the Academy in 2005. The main improvements included better criteria and a more transparent and robust assessment procedure (better educated assessment group, qualitative assessment protocols, and formalized decision authorities). At the same time the project resulted in valuable knowledge about how to reward excellence in university teaching. Ongoing research in this area continues today (see for example, Olsson and Roxå 2008 2012; Larsson, Anderberg, and Olsson 2012).

The Pedagogical Academy is financed by the undergraduate teaching budget. The cost associated with the reward system is covered by reducing the amount given to other departments for each undergraduate student. A full reduction affects those departments where no teachers have been awarded the status of ETP. The model sends a clear signal to LTH's departments that they should encourage ETP competence in relation to the number of students they teach. It also underlines the fact that departments that make a conscious effort to increase the competence of their teachers will be rewarded. At the same time, it can also be noted that

departments without ETPs will suffer only a modest reduction in undergraduate funding. In the overall perspective this reduction might be small in numbers but still carry a clear message.

The demands of the pedagogical academy must be balanced in relation to organizational capacity

Just establishing a reward system is necessarily not enough to drive change in academic settings (Roxå, Mårtensson, and Alveteg 2011). Leaders have to include other aspects in the design while adapting and implementing any reward system for developmental purposes. First, the very concept of development is contested and highly related to ideology (Webb 1996a, 1996b). Academic organizations are often characterized by plurality and critical thinking related to the ability to construct and defend complex bodies of personalized knowledge. Therefore, development in academia often relates to deep and long lasting elements of the academic culture rather than for example the day-to-day constructed agendas of political organizations or corporate enterprises. Leaders and managers of higher education cannot expect academics to develop through predefined pathways; development is reached through a process of learning and interpersonal negotiation (Roxå and Mårtensson 2009). Therefore, development in academia may be demanded in general terms, even awareness of organizational aims, context, and the society can be included in criteria and being rewarded, but the content and direction of the development chosen is harder to prescribe, let alone to govern (Bauer et al. 1999; Stensaker 2006; Merton et al. 2009).

Other aspects of organizational culture also come into play. To implement a reward system is a political act within the organization and the power structures have to be considered in the process. Research and researchers traditionally are more highly regarded than is teaching and teachers. Under these conditions the reward system needs to attract attention from the researchers. If, as is the case here, the culture is research-intensive, important researchers can destroy or at least damage the system if they find it appropriate. Using criteria and procedures based on research from the Scholarship of Teaching and Learning (Roxå, Olsson, and Mårtensson 2008) provides an organizationally appropriate foundation for this effort.

Organizational development in general (Ancona et al. 2009), and academic development in particular, are dependent on complex and interacting organizational matters (Roxå, Mårtensson, and Alveteg 2011). The case described in this article exists in parallel with an extensive programme for academic development: pedagogical courses, student evaluations, campus conferences, extensive consulting (Mårtensson, Roxå, and Olsson 2011), and an engaged, informed, and persistent academic leadership. Development of university teaching is not a quick fix. Effects will not be measurable on a yearly basis but have to move through organizational networks and workgroups before they may become visible (Roxå and Mårtensson 2012; Trigwell 2012). It is more likely that a long-term and multifaceted approach to organizational development, specifically made for the organizational culture at hand, will be successful.

Evidence of impact

In this section we describe some of the attempt made to evaluate the reward system. Note that this is not about the procedurals where the rewarded teachers are assessed; it is about whether the reward system itself contributes to an overall organizational development. One measure of impact was taken from the results of the faculty wide course evaluation system, the Course Experience Questionnaire (CEQ) developed by Ramsden (1991). We used CEQ data from 2006, 2007, and 2008 to compare courses in which rewarded teachers played a significant role, with all evaluated courses at LTH during the same years. The result showed that rewarded teachers are responsible for higher rated courses, according to student evaluations (Olsson and Roxå 2008). Average results for these courses were higher than for all courses in all five categories, especially good teaching and clear goals and standards. Even if the criteria of the reward system are demanding and extensive, and applies for more than just teaching in the classroom, it is vital that teachers considered excellent by LTH also are appreciated by the students.

Another issue worth investigating is how reward systems contribute to the overall development of teaching and learning at the institutional level and its capacity to bring about cultural changes. Our findings (Olsson and Roxå 2008) point towards a significant impact on the local culture, especially as illustrated by who are rewarded. One third of the rewarded teachers are full professors; several leaders at faculty level, including the dean, are rewarded; one third of the heads of departments are rewarded; several members of the two teacher appointment committees, education boards, and research boards are rewarded. The system also affects policy levels, especially recruitment and promotion, faculty competitiveness, and many official documents. The fact that the system has implications for funding and distribution of resources should also not be underestimated.

We have also investigated how pedagogical practice is expressed in teaching portfolios and how it has developed over time by comparing portfolios from 2003 and 2010 (Larsson, Anderberg, and Olsson 2012). Five categories were used in this study. Are there discussions about: (1) *what* is taught in a subject/course; (2) *how* the subject is taught; (3) the *effects* on student learning; (4) visible *linkage and coherence* between theory and practice; and (5) *sharing and disseminating* of expertise and best practice? The results show (Larsson, Anderberg, and Olsson 2012) that the portfolios from 2010 are more reflective with respect to analyses of what is taught and how a subject is taught. In 2003 similar discussions were either not present or only descriptive. In 2003 no linkage between theory and practice was found in any of the investigated portfolios whereas in 2010 theory was used to describe or develop practice, and in one occasion new theory was developed. Analyses of effects on student learning were more based on purposely designed investigations in 2010, whereas in 2003 such analyses were either not found or only based on subjective experiences. Finally, when it comes to sharing and disseminating of knowledge and experiences a clear development from departmental levels to institutional and national levels were found. More arenas were available in 2010, which is clearly visible in the portfolios. Further, we triangulated these results by investigating how papers presented at a biennial campus conference at LTH have developed, using papers from 2003 and 2010. The results (Larsson, Anderberg, and Olsson 2012) were similar to those found with teaching portfolios. In 2010 more

papers were clearly focused on student learning and integrated relevant research. In short, a clear development of quality, according to the criteria described above, of teaching portfolios as well as conference articles is evident between 2003 and 2010.

Transferability

LTH's system for rewarding excellence in university teaching, especially for the benefit of an organization, has gained much positive attention within Lund University, nationally at other Swedish universities, and internationally. We receive many invitations to hold key-notes, lectures, seminars, and workshops, to assess teaching portfolios, and to arrange educations and participate in projects about rewarding excellent teachers. Similar reward systems have been developed at three other faculties at Lund University: the Faculty of Natural Sciences, the Faculty of Medicine, and the Faculty of Social Sciences. Several Swedish universities, for example the Karolinska Institute, Örebro University, Mälardalen University, Umeå University, and Uppsala University, and also some universities in other Nordic countries, have developed reward systems. Experiences and research results from LTH have played an essential role in the development of these systems. Other countries where we have participated in different activities related to reward systems include Germany (workshops and keynote), South Africa (research project; workshops and seminars), India (workshops and seminars), Macedonia (keynote and assessment of teaching portfolios), US (workshops and seminars), UK (seminars and assessment of portfolios), Canada (workshops and seminars), Australia (workshop), and Denmark (workshops and keynotes).

Transferability and migration of ideas within academia is important but difficult. It is not advisable to copy a system from one university or faculty and import it to another institution. Any reward system has to be adjusted to the local culture or it will most certainly not be successful. To illustrate, two reward systems (the Faculty of Social Sciences at Lund University, and the Faculty of Science and Technology at Uppsala University) are described in some detail. Note similarities but also differences compared to LTH's Pedagogical Academy.

Extension of the LTH Pedagogical Academy

The faculty reward system as LTH has contributed to the development of similar systems elsewhere. A reward system at the *Faculty of Social Sciences at Lund University*, called the Teaching Academy, was launched in 2011. This Teaching Academy includes two levels of distinction, *Qualified Teaching Practitioner (QTP)*, and *Excellent Teaching Practitioner (ETP)*. The differences between these levels are defined by assessment criteria. The assessment procedure includes a teaching portfolio, CV, recommendation from the Head of Department, discussions with two colleagues, interview, assessment panel, and decision. The teaching portfolio should be a 'well-structured, running text and should be 5000–7000 words in length.' The assessment panel is comprised of teachers from the Teaching Academy, rewarded at the level of ETP, and an external teaching expert. This panel decides on a recommendation to the Board of the Faculty of Social Sciences (ETP, QTP, or not to put the application to the Board). The assessment criteria for the two levels of

distinction include for QTP level the students' learning process, a scholarly approach that reflects subject breadth and depth, teaching skills and commitment, holistic view and interaction, and finally continual improvement and in depth reflection. At the level of ETP a progression at QTP level must be shown together with skills in leading, organizing and reflecting on educational development, and an ability to enable creative dialogues within and between different subjects and the surrounding community. Experience show that assessment becomes more complicated when a reward system contains more than one level of distinction, mainly because applicants might apply to criteria at the higher level and at the same time be quite weak on criteria at the lower level.

The vice chancellor of *Uppsala University* decided in 2011 that all faculties at the university should develop systems for rewarding excellent teachers. The *Faculty of Science and Technology at Uppsala University* launched its system in the fall of 2012. It comprises one reward level, *Excellent Teacher*. The assessment procedure includes a teaching portfolio, CV, recommendation from the Head of Department, interview, pedagogical test, assessors, and decision in a Board for Excellent Teachers. The teaching portfolio should be 10–15 pages in length. The teaching portfolio is similar to what has been described above. It should include examples from the applicants teaching practice illustrating how the teacher's thinking about education and learning relates to concrete actions. The portfolio should also reflect the breadth of pedagogical activities, including assessment, supervision, pedagogical development work, and leadership.

The Faculty of Science and Technology has introduced a Board for Excellent Teachers that will make decisions, based on recommendations of assessors, on whether to accept or reject applicants as excellent teachers. Two assessors will assess each application, one male and one female. At least one of the assessors must come from a university other than Uppsala University, and at least one must have his or her scientific competence within the applicant's subject area. The Board decides, based on the assessments of the assessors, an interview, and the results of a pedagogical test (the nature of which is not fully determined), if the applicant should be accepted as excellent teacher. The assessment criteria include teaching skills, a comprehensive view, a scientific and scholarly approach, collaborations with colleagues and students, and pedagogical leadership.

These two systems, from Lund University and Uppsala University, are both inspired by LTH's Pedagogical Academy. However, note the differences which make them unique and adapted to the culture and traditions of the respective context.

Umeå University, Uppsala University, Stockholm University and Lund University (Faculty of Engineering) have developed a *national course for assessors of pedagogical competence*. This course is inspired by the development of reward systems at universities nationally. The aim is to develop the ability to assess pedagogical competence at universities locally by offering support and education at a national level. Assessments by experts could potentially act as drivers for quality enhancement if they contain constructive developmental feedback. This aspect is a fundamental part of the course. This national course was developed as a joint effort between universities that previously had cooperated in a two-year project about the Scholarship of Teaching and Learning in Swedish Higher Education – *Strategic Development of Pedagogical Competence* (Ryegård, Apelgren,

and Olsson 2010). In this project ten Swedish universities worked together to define and develop the concept of pedagogical competence. Inspiration from the work with LTH's Pedagogical Academy played an important role in the development of the project.

Concluding remarks

Some themes that we have discussed throughout this text deserve to be emphasized. The first is the need to align evidence, criteria, and standards in any reward system. In research, as in all scholarly activities, congruence among aspects presented and claims made is essential for quality. Only through scholarly assessment of teaching skills and teaching competence the matters described here become trustworthy within an academic context. From this it follows that any system designed to assess and reward excellence in university teaching must build on relevant research and literature. Reward systems implemented for cosmetic purposes will inevitably counteract the development of university teaching.

Secondly, even if educational theory and academic teaching might appear disconnected and sometimes even contradictory, this experience is false. Although, as in all scholarly activities, theory supports observation and understanding, it does not equal the practice. On the other hand, to exclusively engage in practice provides no understanding and most important no language or accounts usable for others to build on. Therefore, the link between practice and theory is unavoidable in a system striving to assess teaching competence; however, the link should be contextually adapted, which means that theories should be chosen for their virtues in relation to the specific teaching context and for their potential to support understanding and development of teaching as measured in student learning and personal development. The value lies in the integration between theory and practice and the development they are able to support.

In addition, the choice indicated early in the text between rewarding individuals or aiming for organizational development does not need to be a choice between either or. Rather, the alternative to design a reward system for the purpose of organizational development may harbour also the purpose to reward engaged academics dedicated to teaching and student learning. However, if we focus only on individuals organizational development does not necessarily follow.

It is also important to note that reward systems by themselves will hardly reach measurable impacts on academic institutions. The development of teaching needs complex and multi-layered support initiatives. Academic teachers are not by default able to reflect on the teaching practice they are engaged in. There is a need for various forms of scaffolding. The most obvious in this case are workshops for writing portfolios, pedagogical courses, arenas for going public (like campus conferences, newsletters and local journals), and consultative support. The guiding principle for these actions is the value added for the teachers as they strive to develop their pedagogical competence. If support is missing, the reward system is only suited for the already enlightened. Considering the long period of training needed to become a scholar in a discipline, an investment of some weeks of working hours to develop a basic understanding of how to become and further develop as a pedagogically competent academic teacher is not a high price to pay. This claim is of course

dependent on the seriousness of the institution in question. If opportunities for recognition are lacking, this price definitely rises.

Finally, academic organizations are occupied by academics trained to construct complex personalized knowledge. This places demands on academic leaders to be informed, confident, and patient. A reward system that is scholarly designed and inspired by experiences gained elsewhere will most likely produce measurable development, but only after some time. In the example described here, three deans have served their time and only most recently has the impact become measurable. A system perspective on organizational development (Senge 2006) is both needed and most useful.

Notes on contributors

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Torgny Roxå, an academic developer since 1988, is currently at the Faculty of Engineering at Lund University and teaches numerous pedagogical courses. His research focuses on Strategic Educational Development in Higher Education using a socio-cultural approach. He has won the Lund University award for distinguished pedagogical achievements and has served as an external examiner for the Postgraduate Diploma in Learning and Teaching at Oxford University and at the Central European University in Budapest. He is presently an honorary fellow at the University of Ulster. In 2011 he was elected as vice president (Europe) of the International Society for the Scholarship of Teaching and Learning.

References

- Abrahamsson, B. 2001. *Careers Through Promotion and Recruiting*, (in Swedish). Stockholm: The National Agency for Higher Education.
- Ancona, D., T. Kochan, M. Scully, J. van Maanan, and E. Westney. 2009. *Managing for the Future. Organizational Behaviour & Processes*. Mason: South Western CENGAGE Learning.
- Antman, L., and T. Olsson. 2007. "A Two-Dimensional Matrix Model for Analysing Scholarly Approaches to Teaching and Learning." In *Improving Student Learning through Teaching*, edited by C. Rust, 54–72. Oxford: The Oxford Centre for Staff and Learning Development.
- Apelgren, K., and B. Giertz. 2001. *Teaching Portfolios* (in Swedish). Uppsala: Uppsala University.
- Argyris, C., and D. Schön. 1974. *Theory in Practice: Increasing Professional Effectiveness*. San Francisco: Jossey-Bass.
- Argyris, C., and D. Schön. 1978. *Organizational Learning: A Theory of Action Perspective*. Reading Mass: Addison Wesley.
- Ashwin, P., and K. Trigwell. 2004. "Investigating Staff and Educational Development." In *Enhancing Staff and Educational Development*, edited by D. Baume and P. Kahn, 117–131. London: Routledge.

- Barr, R. B., and J. Tagg. 1995. "From Teaching to Learning – A New Paradigm for Undergraduate Education." *Change: The Magazine of Higher Learning* 27 (6): 12–25. doi:10.1080/00091383.1995.10544672.
- Bauer, M., B. Askling, S. G. Marton, and F. Marton. 1999. *Transforming Universities. Changing Patterns of Governance, Structure and Learning in Swedish Higher Education*. London: Jessica Kingsley.
- Biggs, J. B., and K. F. Collis. 1982. *Evaluating the Quality of Learning*. The SOLO Taxonomy (Structure of the Observed Learning Outcome). New York: Academic Press.
- Boyer, E. L. 1990. *Scholarship Reconsidered. Priorities of the Professoriate*. Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.
- Casey, R. J., P. Gentile, and S. W. Bigger. 1997. "Teaching Appraisal in Higher Education: An Australian Perspective." *Higher Education* 34: 459–482. doi:10.1023/A:1003042830109.
- Chalmers, D. 2011. "Progress and Challenges to the Recognition and Reward of the Scholarship of Teaching in Higher Education." *Higher Education Research & Development* 30 (1): 25–38. doi:10.1080/07294360.2011.536970.
- Chism, N. V. N. 2006. "Teaching Awards: What Do They Award? *The Journal of Higher Education* 77 (4): 589–617. doi:10.1353/jhe.2006.0031.
- Elton, L. 1998. "Dimensions of Excellence in University Teaching." *The International Journal for Academic Development* 3 (1): 3–11. doi:10.1080/1360144980030102.
- Festinger, L. 1957. *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.
- Fransson, A., and S. Wahlén. 2001. *New Conditions for Learning in Higher Education*, (in Swedish). Stockholm: SOU 2001:1.
- Gibbs, G. 1995. "Promoting Excellent Teaching is Harder than You'd Think." *Change: The Magazine of Higher Education* 27 (3): 16–21.
- Giertz, B. 2003. *Att bedöma pedagogisk skicklighet – går det?* [Assessing Teaching Skills] (in Swedish), UPI-rapport2. Uppsala: Uppsala University.
- Ginns, P., J. Kitay, and M. Prosser. 2010. "Transfer of Academic Staff Learning in a Research Intensive University." *Teaching in Higher Education* 15 (3): 235–246. doi:10.1080/13562511003740783.
- Gran, B. 2006. *Pedagogisk utbildning för högskolans lärare – utvärdering av ett pilotprojekt* [Teacher Training for University Teachers - Evaluation of a Pilot Project]. (in Swedish). Lund: Lund University.
- Handal, G. 1999. "Consultation Using Critical Friends." In *Using Consultants to Improve Teaching*, edited by C. Knapper and S. Piccinin, 59–70. San Francisco: Jossey-Bass.
- Healey, M. 2000. "Developing the Scholarship of Teaching in Higher Education: A Discipline-based Approach." *Higher Education Research and Development* 19 (2): 169–189. doi:10.1080/072943600445637.
- Kember, D., and K. Kwan. 2000. "Lecturers' Approaches To Teaching and Their Relationship to Conceptions of Good Teaching." *Instructional Science* 28: 469–490. doi:10.1023/A:1026569608656.
- Knight, P. 2002. *Being a Teacher in Higher Education*. Philadelphia: The Society for Research into Higher Education & Open University Press.
- Kolb, D. A. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall.
- Kreber, C. 2000. "How University Teaching Award Winners Conceptualise Academic Work: Some Further Thought on the Meaning of Scholarship." *Teaching in Higher Education* 5 (1): 61–78. doi:10.1080/135625100114966.
- Kreber, C. 2002. "Teaching Excellence, Teaching Expertise, and the Scholarship of Teaching." *Innovative Higher Education* 27 (1): 5–23. doi:10.1023/A:1020464222360.
- Kreber, C., and H. Castleden. 2009. "Reflection on Teaching and Epistemological Structure: Reflective and Critically Reflective Processes in 'Pure/Soft' and 'Pure/Hard' Fields." *Higher Education* 57: 509–531. doi:10.1007/s10734-008-9158-9.
- Larsson, M., E. Anderberg, and T. Olsson. 2012. Researching the Transformation in the Scholarship of Teaching and Learning Through Teaching Portfolios and Conference Papers: A Reflection at the Institutional Level. Manuscript ready for publication. Johannesburg: University of the Witwatersrand.

- Lund University – Faculty of Engineering. 2005. *LTH's Pedagogical Academy*. Lund: Lund University, Faculty of Engineering.
- Magin, D. J. 1998. "Rewarding Good Teaching: A Matter of Demonstrated Proficiency or Documented Achievement?" *The International Journal for Academic Development* 3 (2): 124–135. doi:10.1080/1360144980030205.
- Mårtensson, K., T. Roxå, and T. Olsson. 2011. "Developing a Quality Culture through the Scholarship of Teaching and Learning." *Higher Education Research & Development* 1: 51–62. doi:10.1080/07294360.2011.536972.
- McAlpine, L., and R. Harris. 2002. "Evaluating Teaching Effectiveness and Teaching Improvement: A Language for Institutional Policies and Academic Development Practices." *The International Journal for Academic Development* 7 (1): 7–17. doi:10.1080/13601440210156439.
- Merton, P., J. Froyd, C. Clark, and J. Richardson. 2009. "A Case Study of Relationships between Organizational Culture and Curricular Change in Engineering Education." *Innovative Higher Education* 34: 219–233. doi:10.1007/s10755-009-9114-3.
- Mezirow, J. 1991. *Transformative Dimensions of Adult Learning*. San Francisco: Jossey-Bass.
- Olsson, T., K. Mårtensson, and T. Roxå. 2010. "Pedagogical Competence – A Development Perspective from Lund University." In *A Swedish Perspective on Pedagogical Competence*, edited by Å. Ryegård, K. Apelgren and T. Olsson, 121–132. Uppsala: Uppsala University, Division for Development of Teaching and Learning.
- Olsson, T., and T. Roxå. 2008. "Evaluating Rewards for Teaching – A Cultural Approach." *Engaging Communities* 261–272. Proceedings of the 31st HERDSA Annual Conference, Rotorua, July 1–4, 2008.
- Olsson, T., and T. Roxå. 2012. "A Model Promoting Conceptual Change in Higher Education – An Integrated Approach." *Research and Development in Higher Education: Connections in Higher Education*, Volume 35: Refereed papers from the 35th HERDSA Annual International Conference, Rotorua, July 2–5, 2012: 213–223.
- Posner, G. J., K. A. Strike, P. W. Hewson, and W. A. Gertzog. 1982. "Accommodation of a Scientific Conception: Toward a Theory of Conceptual Change." *Science Education* 66 (2): 211–227. doi:10.1002/sci.3730660207.
- Prosser, M., and K. Trigwell. 1999. *Understanding Learning and Teaching. The Experience in Higher Education*. Philadelphia: The Society for Research into Higher Education & Open University Press.
- Ramsden, P. 1991. "A Performance Indicator of Teaching Quality in Higher Education: The Course Experience Questionnaire." *Studies in Higher Education* 16 (2): 129–150. doi:10.1080/03075079112331382944.
- Ramsden, P., and E. Martin. 1996. "Recognition of Good University Teaching: Policies from An Australian Study." *Studies in Higher Education* 21 (3): 299–315. doi:10.1080/03075079612331381231.
- Roxå, T., and K. Mårtensson. 2009. "Significant Conversations and Significant Networks – Exploring the Backstage of the Teaching Arena." *Studies in Higher Education* 5: 547–559. doi:10.1080/03075070802597200.
- Roxå, T., and K. Mårtensson. 2011. *Understanding Strong Academic Micro Cultures – An Exploratory Study*. Lund: Lund University.
- Roxå, T., and K. Mårtensson. 2012. "How Effects from Teacher Training of Academic Teachers Propagate into the Meso Level and Beyond." In *Teacher Development in Higher Education. Existing Programs, Program Impact, and Future Trends*, edited by E. Simon and G. Pleschova. London: Routledge.
- Roxå, T., K. Mårtensson, and M. Alveteg. 2011. "Understanding and Influencing Teaching and Learning Cultures at University: A Network Approach." *Higher Education* 62: 99–111. doi:10.1007/s10734-010-9368-9.
- Roxå, T., T. Olsson, and K. Mårtensson. 2008. "Appropriate Use of Theory in the Scholarship of Teaching and Learning as a Strategy for Institutional Development." *Arts and Humanities in Higher Education* 7 (3): 276–294. doi:10.1177/1474022208094412.
- Ryegård, Å., K. Apelgren, and T. Olsson, eds., 2010. *A Swedish Perspective on Pedagogical Competence*. Uppsala: Uppsala University, Division for Development of Teaching and Learning.

- Schön, D. 1983. *The Reflective Practitioner*. New York: Basic Books.
- Seldin, P. 1997. *The Teaching Portfolio. A Practical Guide to Improved Performance and Promotion/Tenure Decisions*. Bolton, MA: Anker.
- Senge, P. M. 2006. *The Fifth Discipline – The Art and Practice of the Learning Organization*. 2nd ed. New York: Doubleday.
- Shulman, L. 1986. “Those Who Understand: Knowledge Growth in Teaching.” *Educational Researcher* 15 (2): 4–14. doi:10.3/02/0013189X015002004.
- Stensaker, B. 2006. “Governmental Policy, Organisational Ideals and Institutional Adaptation in Norwegian Higher Education.” *Studies in Higher Education* 31 (1): 43–56. doi:10.1080/03075070500392276.
- Thompson, J., M. Cook, D. Cottrell, R. Lewis, and B. Miller. 1998. “Developing an Institutional Framework for Rewarding Excellence in Teaching: A Case Study.” *Quality Assurance in Education* 6 (2): 97–105. doi:10.1108/09684889810205750.
- Trigwell, K. 2001. “Judging University Teaching.” *The International Journal for Academic Development* 6 (1): 65–73. doi:10.1080/13601440110033698.
- Trigwell, K. 2012. “Evaluating the Impact of University Teaching Development Programmes. Methodologies that Ask Why There is an Impact.” In *Teacher Development in Higher Education. Existing Programs, Program Impact, and Future Trends*, edited by E. Simon and G. Pleschova, 257–273. London: Routledge.
- Trigwell, K., E. Martin, J. Benjamin, and M. Prosser. 2000. “Scholarship of Teaching: A Model.” *Higher Education Research and Development* 19 (2): 155–168. doi:10.1080/072943600445628.
- Trigwell, K., and S. Shale. 2004. “Student Learning and the Scholarship of University Teaching.” *Studies in Higher Education* 29 (4): 523–536. doi:10.1080/0307507042000236407.
- Trowler, P. 2008. *Cultures and Change in Higher Education. Theories and Practice*. Gordonsville, VA: Palgrave Macmillan.
- Webb, G. 1996a. “Theories of Staff Development: Development and Understanding.” *International Journal for Academic Development* 1 (1): 63–39. doi:10.1080/1360144960010107.
- Webb, G. 1996b. “Theories of Staff Development: Progress and Power.” *International Journal for Academic Development* 1 (2): 59–66. doi:10.1080/1360144960010208.