Lärande i LTH

Genombrottet är LTH:s pedagogiska stöd- och utvecklinghenhet som bland annat ger högskolepedagogiska kurser och beforskar undervisning och lärande. Genombrottet bistår också lärare, programansvariga och LTH-ledningen med stöd för undervisningsplanering, undersökningar och ett ramverk för högskolepedagogisk meritering.


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Linda Price, Visiting Professor at Genombrottet, LTH
Promoting the use of educational technology in a way that support student learning

Visiting Professor at Genombrottet LTH

Linda Price, Genombrottet, LTH and Open University, United Kingdom

Who is Linda Price? I am employed in the Institute of Educational Technology at the Open University, UK, and now also work as Visiting Professor at LTH for 20% during two years. I have been researching and promoting pedagogically-driven uses of educational technology in a range of contexts in higher education for more than 17 years. I use my research and that of others to foster academic practice that promotes student-centred learning and engenders scholarly approaches to teaching and learning. I have led workshops on this in the UK and abroad. I have worked through the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) with international colleagues on how to promote scholarly practices in teaching and learning. My recent research focuses on investigating and developing models of scholarly practices using technology in learning and teaching through understanding academics’ conceptions of and approaches to teaching and learning with technology.

My educational practice also includes teaching in further education colleges in more vocationally oriented programmes, i.e. computer programming, and in teaching at a secondary school in Northern Ireland. This experience has taught me the importance of context: not just the context of the institution or the topic of study, but also the student’s personal context and how one has to be sensitive to this in the teaching situation as it can influence how well the student succeeds. The power of education has been particularly important in Northern Ireland; as people have become more educated they have become more tolerant of each other and violence has reduced significantly. I believe that good education is an important component of any civil and developing society.

I have also worked in industry. I was a computer programmer/analyst in industry for a number of years – so I’ve been in the ‘trenches’ so to speak. My industrial experience gives me a perspective of what might be expected of graduates after they leave university and what employers might expect of them. This has instilled in me a strongly ‘authentic’ approach to assessment in relation to student learning. A considerable amount of what ‘counts’ for assessment and evaluation of an individual in university, is not always what ‘counts’ in the real world. So assessment strategies at university, always need to be finely balanced between developing individuals and in preparing them for the workplace. This ideal of authentic assessment is one that I am interested in promoting: it’s valuable for the graduate entering the workplace and valuable for university’s reputation in terms of the calibre of student able to adapt quickly and effectively to the workplace.

I also have four children and this gives me yet another perspective on education and how technology can be used to support students. I have two children still at secondary school and two that have completed their higher education. Seeing how all my children have used technology in their various stages of learning provides an insight into how activities can be interpreted from the learner’s perspective. This insight has shown me that it is all too easy to make judgements about the learning activities from a teaching perspective without really understanding the challenges that it presents for learners. In a more robust manner, I research this within my substantive post at the Open University. I use my research to foreground the student experience and to give the students a voice. I carry out large scale quantitative studies and small scale qualitative studies to investigate how students experience various phenomena, particularly educational technology, in their programmes of study. The Open University’s focus on the student experience has managed to establish it as one of the top universities in the UK, where the National Student Survey, administered annually by the government has illustrated that students have regarded their experience at the Open University highly. The Open University has been ranked as the top university for nearly six years in succession. This is particularly impressive given that it is a distance education university, with no entry requirements and typically has around 250,000 students per year. I am proud to be working at a university that offers a chance for a university education to students who may not have had the opportunity to enter higher education at the age of 18, or who may not have initially gained the appropriate qualifications to gain entry into a university programme.

So why did I end up as a Visiting Professor at Genombrottet, LTH? LTH is particularly highly regarded for its scholarly approach to academic development and student learning. It is strongly research-based and uses good evidence to underpin its programmes. At conferences I was always attending presentations held by representatives from Genombrottet as their research and their ideology was very close to my own. It was great to be able to exchange research ideas about how to improve student learning in a robust and scholarly way and how we could support our colleagues in their teaching to help achieve that. I always thought it would be great to work with these people but never dreamed that it would happen. Then Roy Andersson at Genombrottet came to the Open University for an Erasmus exchange visit and I reciprocated a few months later. Genombrottet wanted to be able to support colleagues in using technology in their teaching and learning in a scholarly way and I had been running workshops and programmes in this for many years at the Open University. So this was an ideal opportunity for us all to work together to exchange ideas, expertise and experiences.
My ambitions and expectations for my work at LTH is that I want to be able to support the great work that goes on at Genombrottet and at LTH and to be part of a forward thinking and scholarly unit that develops teaching and learning in such a thorough, collegiate and thoughtful manner. I also want to be able to promote the use of educational technology in a way that actually helps the students in their learning, where it is not perceived as an added or extra activity to what they already do. In other words an integrated activity that helps students achieve their learning goals, or to quote John Biggs 'constructively aligned'. A considerable amount of what I have found through my research is that technology has been used for the 'sake of technology'. In other words it is not clear how it is helping students in their learning. I have often observed a 'technology determinist' approach to using educational technology. By this I mean that the use of technology is underpinned by an assumption that by merely 'adding' it, learning will improve more or less by itself. This tends to result in 'presentational' uses of technology, such as better PowerPoint slides, better quality lecture notes on the internet, or podcasts of face-to-face lectures, where the focus is on improving teaching. Research has shown that this leads to passive and less engaging forms of student learning and does little to enhance students' opportunities for development. Instead I would like to promote more transformational uses of technologies that engender pedagogically determined use. This aims to use the technology to develop students, and not the teaching per se. It supports active engagement of the students in forms of learning or activities not previously possible. It also attempts to use the technology to help students develop skills that they might need in the workplace through authentic assessment practices. One of the big challenges of course is in supporting the development of student-centred learning practices. This is not about developing technical skills per se but requires a paradigm shift: from an instructivist paradigm, where the teacher's job is to pass on their knowledge, to a learning (or constructivist) paradigm, where the focus is on helping the students develop their own learning, not just now, but in the future too.

One of my main aims in life is to encourage thoughtful, scholarly, pedagogically driven uses of technology that enables the collection of good evidence through which sound judgements can be made about its efficacy in various contexts. I have been researching the use of educational technology for many years and my findings, and that of others, has shown that a considerable amount of technology use has been aimed at replicating existing practices. The opportunity to develop more transformational approaches to using technology is often under-achieved. There appear to be several reasons for this. One is in relation to conceptions or beliefs about what teaching is. If a teacher considers teaching to be about transmitting knowledge to the student – then that teacher's use of technology will often result in replication. Using technology in more transformational ways is not about developing better skills but in changing thinking, and I would like to be part of that. However changing the views of teaching staff alone is not sufficient. My research has shown that many teachers in higher education feel constrained by either the dominant teaching paradigm in the department or faculty, or the surrounding policies and teaching programmes already in existence. Promotion criteria too are highly influential in determining academics' activities as they influence the value system, regardless of whether an academic is seeking promotion or not. Hence there is work to be done at policy level and with senior managers in illustrating the significance of their policies in determining actions, some of which might be unintended.

This is important if we are to impact on student learning in a positive and developmental manner. Students in the future will no longer be judged merely on the body of knowledge that they leave university with, but upon how well they are able to find information and develop answers and solutions to problems in the future. In order to do this they will need to know how to use technology to find appropriate information, be able to discern its value, discuss this with other peers in their field and develop appropriate solutions. They will need to have developed independent learning skills in finding and developing solutions. So my overall life aim would be to work across the various levels of the university stratosphere in order to change minds and cultures towards more student-centred learning that employs technology to develop students who can operate in a global and uncertain world in the future.

**Motivation, peer learning and feedback in flexible learning**

**Virtual Learning Environments**

Andreas Larsson, Bitte Rydeman and Per-Olof Hedvall, Department of Design Sciences, LTH

Flexible learning is designed to provide learners with increased choice, convenience and personalisation. In Virtual Learning Environments (VLEs), what students – and their teachers – actually do can differ quite widely from a more traditional classroom context. At the Department of Design Sciences, we took a closer look at two courses that rely entirely on VLEs to see how the concepts of feedback, peer learning and motivation play out under these flexible circumstances. Both courses in our study; “Design of Everyday Cognitive Support” and “Use of Digital Pictu-
and worked in different ways, they often seemed to come together, so that they could learn from each other. The student could see each other’s texts in one of the courses, and she noted that she liked the fact that the students appreciated each other virtually or arrange to meet in person if they wished. This relates to the observation – in the two courses we studied – that many students wished to see their teachers and fellow students and talk to them, instead of just writing. Another way is to plan a couple of audio conferences (e.g. Skype or similar) where the students can ask questions and other agents. Apart from insufficient teacher resources to provide feedback to students, many students have difficulties understanding what their teachers really mean, and they often lack specific advice on how to improve.

Relevant to this challenge is the concept of dialogic feedback cycles (Beaumont, O’Doherty, & Shannon, 2008), where interpretations are shared, meanings negotiated and expectations clarified in an interactive exchange. For example, teachers could use two-stage assignments to motivate students to engage in peer learning (Boud, 1999) with the teacher as a coach and facilitator rather than as an authority. Peer learning involves “people from similar social groupings who are not professional teachers helping each other to learn and learning themselves by so doing.” (Boud, 1999) A key challenge when aiming at peer learning is that peers are not domain experts, as opposed to teachers, which means that the accuracy of peer feedback can vary greatly. Feedback from peers may be partially correct, fully incorrect or misleading (Gielen et al, 2010). Further, since a peer is usually not regarded as a “knowledge authority”, students can be reluctant to accept judgement or advice made by a peer (Gielen et al, 2010). Interestingly, there are some potential benefits following from these considerations. For example, the absence of an obvious “knowledge authority” (e.g., a teacher) implies that students need to be mindful about the accuracy of the feedback they receive, inducing discussions and reflections about the interpretation.

Since the studied courses only took place online, the students never met in person, apart from some students who themselves arranged a meeting with other students who lived nearby. The students thus had some flexibility in choosing when, where and how to interact with students and teachers. However, even if all students had the possibility to interact with the other students and the teachers through the forums, there were huge differences between the students regarding how much they took advantage of this opportunity. Some students attended both these courses, and one such student started an interesting discussion in one of the courses, noting that she liked the fact that the students could see each other’s texts in one of the courses, and she suggested that it ought to be like that in the other course, too, so that they could learn from each other. The student stated, that despite the fact that the students were different and worked in different ways, they often seemed to come across the same problems. She concluded: “Sometimes other thought paths are needed to open new possibilities and I think you would get that if you had the opportunity to study each other’s texts.”

There were several written assignments in both courses, which the students had to send to the teacher or post in the forums. The teachers gave written feedback to the students on each assignment, and this feedback included suggestions about what the students needed to do to improve. This kind of feedback was given to the students individually and was usually not visible in the forums, so although it had the desired qualities (Hattie & Timperley, 2007; Corneli & Mikrovannidis, 2011) it did not benefit the whole group. In the forums for learning, two forums stand out, in which there was a high amount of feedback between the students. In these forums it was mandatory to comment on the other students’ posts. For students to be willing to take the extra step to give feedback, doing so must to be useful for the students (Corneli & Mikrovannidis, 2011). One suggestion is to create more assignments or exercises that help the students analyze and reflect both their own work and that of others. For example, one of the authors introduced a “feedforward” exercise in one of his classes, where student teams were asked to, first, comment and reflect on advantages and drawbacks of another team’s mid-project presentation and, second, provide suggestions on how to take the project forward. This served the dual purpose of allowing students to give feedback on the past performance of their peers and, most importantly, use the feedforward technique to help the other team improve their performance in the forthcoming stages of their project. While mandatory assignments are mainly aboutextrinsic motivation, it still seems like intrinsic motivation increases when you have personal experience from feedback cycles that work – and perhaps we need to introduce mandatory feedback/feedforward cycles among peers early on in the courses, to create a sustainable“feedback culture”? In the feedforward example above, students reported that they felt that it was very useful to discuss and reflect on their projects with peers that could relate closely to what they were experiencing at the time.

This relates to the observation – in the two courses we studied – that many students wished to see their teachers and fellow students and talk to them, instead of just writing. In the future, some assignments could be created as group assignments, where the participants can see and talk to each other virtually or arrange to meet in person if they get to participate with one or two students who live nearby. Another way is to plan a couple of audio conferences (e.g. Skype or similar) where the students can ask questions and bring up subjects that they find hard to write about, receiving advice from both students and teachers. Regardless of the specific formats that could be used to facilitate interactive exchange among peers, we have found that it is useful to rethink the ways in which teachers introduce feedback mechanisms in both physical and virtual learning environments, and the roles that students can play in their peers’ learning process. A teacher could increasingly take on the role as facilitator of knowledge creation in a highly dynamic and social setting, as opposed to taking the traditional role as the “provider” of knowledge. Most likely, doing so would also help create a collaborative lear-
Teaching common language in architecture with short movies

Students producing audio-visual educational material

Delphine Bard, Engineering Acoustics, LTH, Tina-Henriette Kristiansen, Architecture, LTH and Eva Frühwald Hansson, Structural Engineering, LTH

At the school of Architecture, Lund University, courses are taught in different ways. A large part of the education during year one and two is held as “studios”, doing creative (individual) project work, with helping teachers always available for supporting the students. Smaller courses, as the “technical courses”, rather correspond to the traditional engineering education style, using lectures, exercises, small project works (in larger groups) and final written examination. The problem is that many students are not able to fully assimilate the content from the technical courses and don’t know how they should make use of the gathered information in their creative project works. They also have difficulties in talking about their project works, as they are lacking a common architectural language.

The aim of the study was to improve upon the existing teaching/learning scheme by introducing new methodologies. As such, it is about teaching common architectural language and tools to first and second year architectural students at LTH. We strive to teach our students the concepts and techniques that underlie the field of study, and to do so to a greater extent that the most important learning experiences are those that happen outside of the classroom.

In virtual learning environments, this realization is even more important, considering that questions, answers and reflections can be shared rather effortlessly at any hour of the day, from any location.

References


Hansson, Structural Engineering, LTH


In the second assignment, they should implement the new knowledge gathered in the first assignment into their individual creative projects. The topic was the remodeling of an existing building into students living units. The students should focus on three topics: structure, acoustics and one more topic of their choice from the movies, see figure 2.

The results from the second assignment showed that the students who normally would be at a higher taxonomy level also seemed to integrate an implementation of the gained knowledge from the first assignment. There was also a very clear difference between first and second year students, besides a few exceptions. It seemed like the first year students, who were not trained in the creative process, had enough to do with understanding the assignment, getting an idea about how to turn their ideas into images, and tended to forget about the implementation of acoustics and construction. Only a very few of the first year students addressed acoustics issues in their projects. There was a very clear new focus on light and its quality, however, which had not been addressed before at this level. In addition, light construction was addressed in more projects.

In conclusion, most students produced really impressive movies and everybody liked this assignment. However, the implementation into the individual creative projects was not equally good, as most students had not included thoughts about acoustics and structure, two essential topics. Only the very best students, mostly from the second year, really improved and reached a higher level of understanding when assessing their level before and after the second assignment.

Figure 2: Basic topics in architecture to be implemented in the creative assignment.

Teaching and Learning adaptation for International students - The case of Sweden

Teacher and student views on teaching and learning for international students


Every year the number of international students increases worldwide. Moreover, the number of international students in western universities has drastically increased in the last four decades. For the newcomer students, the change of country includes new challenges and difficulties such as having to deal with different culture and people in the host country. Social and psychological factors that facilitate adaptation to the host country environment have been under focus of many international researches during the last ten years. Lack of such adaptation mechanisms, could hamper learning objectives. Both teaching and learning could employ methods to facilitate the adaptation to a higher degree. Although there were 31,000 international students registered in Sweden in the academic year 2007/2008 still not much research in this area has been done. Hence, this investigation attempts to tackle the lack of studies in this area by investigating learning and teaching adaptations for international students in the higher education system in Sweden.

We used a mixed-method with the intention to combine both teacher and student views on teaching and learning for international students. A survey with a semi-open questionnaire was used to capture international student perspectives (74 in total), and 11 semi-structured interviews were conducted to capture teachers’ perspectives. The interviews with the teachers were carried out face-to-face whilst the inquiries to the students were sent via Internet by means of an electronic survey. It should be noted that the results are not intended to come to generalization, but rather an indication of problems. In fact, cultural generalization among students could potentially hinder the teaching and learning process and thus pre-perception should be avoided.

In the survey, it was found that international students perceived the Swedish students more proficient in the English language. They also found it difficult to interact with Swedish students and to integrate with the culture (e.g. in finding friends). There was a general opinion between South European students that they had a broader theoretical background than the average Swedish student. They perceived the Swedish educational system more practical-oriented; i.e. in contrast to other countries, where learning might be based solely from lectures, focus is on group works and self-
study exercises. Overall, International students thought that Swedish students are more focused, organized, formal, serious and interested, making them more competitive, productive and effective during their studies and in their future career. Respondents perceived the Swedish students to have better knowledge of the education system. They also perceived the Swedish students to normally be more participative in class.

Also, almost all participants mentioned the informal student-teacher relationship. The authors argue that idealization of the teacher-student interaction could be dangerous in the sense that it could be hiding underlying teaching and learning problems. Kindness, politeness, help and proximity, do not necessarily imply a correct pedagogical attitude, although it may help. Furthermore, one should be careful as this protective behavior could even turn into a lack of critical feedback to students.

At the same time, we found that teachers detect several of these challenges while oversee the cultural adaptation challenges such as not finding friends, not learning the Swedish language, and all the factors that impact their integration within the Swedish norms and daily life. Language barriers, knowledge of the education system (expectations, norms, etc.), developing Swedish-International dynamics among students, and differences in student-teacher relation norms were found to be important factors that could prevent effective knowledge transfer.

One point mentioned by teachers as a challenge in adapting to international students but not mentioned by the students, was cultural, political, and religious sensitivities. We interpreted this in three ways: 1) that the awareness of teachers has been effective, 2) that this is not perceived as an issue by students, or 3) that students find this issue too sensitive to mention. This could however, prevent inter-cultural learning within class. One suggestion is for teachers to actively use the cultural differences in teaching to further encourage and develop a forum for inter-cultural learnings.

From these findings in our empirical study, we found that the international students face both cultural and academic shock. The relevant adaptation methods followed both by teachers and students were positive in most cases. This further improves the one-way adaptation model into two-ways. Actions such as: group work to create a social interactive play, as referred in the sociocultural theory, is crucial to promote critical thinking in class and is already a norm in Sweden. Efforts from both students and teachers to remove the language barriers are also found in our case study, as it is an important motivation for cross-border studies. However, embedding different culture to reach a mutual learning goal is another question. Many measures taken are still perceived as seeing international students as “problems”, rather than the “bearer of cultures”. It still occurs for example, that classes are separated between the locals and international students. This neglect could potentially hinder the learning from both sides, since we could understand ourselves better, just by looking at others.

The authors: Jingjing Zhang (top left), Juan Negreira Montero (top right), Ala Pazirandeh (bottom left), Delphine Bard (bottom middle) and Vahid Sohrabpour (bottom right).
LTH:s Högskolepedagogiska kompetensutvecklingskurser våren 2013

Nedan ges information om vårens återstående kurser. Förutom de allmänna högskolepedagogiska översiktskurserna erbjuds även mer praktiknära kurser samt individuella fördjupningskurser med förhoppningen att kunna möta intresseområdena bland LTH:s lärare. För utförligare information (kurstider, datum, med mera) hänvisas till Genombrottets hemsida http://www.lth.se/genombrottet, där det också finns information om kurser av andra kursgivare öppna för LTH-lärare.

Introduction to Teaching and Learning in Higher Education (2v)
As a PhD student or a new teacher at LTH you are invited to Introduction to Teaching and Learning in Higher Education (this course is equivalent to the course Högskolepedagogisk introduktionskurs but given in English). Introduction to Teaching and Learning in Higher Education is an elective course of the qualifying programme in teaching and learning in higher education and of third-cycle education at LTH. The course provides an overview of teaching and learning in higher education and is intended for lecturers with little or no higher education teacher training and for doctoral students who teach or are about to assume teaching duties. The course introduces you to current concepts of teaching and learning in higher education in order to develop your ability to improve student learning. It also provides an introduction for your further professional development as a university teacher. The course is focused on students and their situation including students with special needs, the role of the teacher and his/her professional development, learning as a cognitive process, different teaching methods and their effect on students’ learning, assessment and its impact on students’ learning, evaluation at different levels, communication and pedagogical qualifications for teachers in higher education. Last day to register April 28 2013, course start May 27 2013.

Kom ihåg


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