

What triggers emotions in university teaching?

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Abstract

This study explores the range of university teachers' emotions and, most importantly, triggers of these emotions. Sixteen teachers representing six disciplines were interviewed before and after teaching a specific course. A range of emotions was identified through qualitative content analysis. Emotions ranged from positive to negative, and several triggering elements were identified, which were grouped under five categories: 1) Teaching process, 2) student learning outcomes and experiences, 3) teacher characteristics and teaching skills, 4) student roles and activity levels and 5) interaction between teachers and students. Differences between teachers who

had participated in pedagogical courses and those who had not were detected in the triggering elements. The study provides a deeper understanding of the nature and triggering elements of emotions in academic contexts. Identifying what triggers emotions in university teaching is important in supporting teachers to recognize and regulate their emotions.

Keywords: *Emotions; university teaching; pedagogical training*

Tiivistelmä

Tutkimuksessa tarkastellaan yliopisto-opettajien kuvaamia opetukseen liitty-

viä tunteita, sekä näitä tunteita herättäviä tekijöitä. Tutkimukseen osallistui 16 yliopisto-opettajaa kuudelta eri tieteenalalta, jotka haastateltiin ennen opettamaansa kurssia ja sen jälkeen. Aineisto analysoitiin laadullisella sisällönanalyysillä. Opettajat kuvasivat sekä positiivisia että negatiivisia tunteita, ja aineistosta tunnistettiin useita tunteita herättäviä tekijöitä: 1) Opetusprosessin, 2) opiskelijoiden oppimistulokset ja kokemukset, 3) opettajan ominaisuudet ja opetustaito, 4) opiskelijoiden rooli ja aktiivisuus sekä 5) opettajan ja opiskelijoiden välinen vuorovaikutus. Opettajat joil-

la ei ollut lainkaan pedagogista koulutusta erosivat osittain tunteita herättävien tekijöiden suhteen opettajista joilla oli pedagogista koulutusta. Tutkimuksen tulosten avulla yliopisto-opetukseen liittyviä tunteita sekä tunteita herättäviä tekijöitä voidaan ymmärtää syvällisemmin. Tunteita herättävien tekijöiden tunnistaminen on tärkeää, jotta opettajia voidaan tukea tunnistamaan ja säätelemään opetukseen liittyviä tunteitaan.

Avainsanat: *Tunteet; yliopisto-opetus; pedagoginen koulutus*

Introduction

Research on teaching in higher education has mainly investigated teachers' conceptions of teaching and learning and their approaches to teaching, including their intentions, goals or motives and corresponding strategies. Thus, previous research has addressed the motivational and cognitive aspects of teaching, while the emotional aspect of teaching has received less attention (e.g. Mayer, Salovey & Caruso, 2004). In the late 1990s and early 2000s, researchers began to emphasise that teaching is not only about mastering the subject and appropriate teaching methods, but also about experiencing a variety of emotions during the teaching process. Therefore, emotions can be considered a central component of teaching (Entwistle et al., 2000; Hargreaves, 1998). Sutton and Wheatley (2003) suggest that the role of emotions in teaching might be neglected in research because of the irrational tone of emotions. Emotions are often thought of as out-of-control, primitive, and incompatible with the civilised nature of

the academic world (Sutton & Wheatley, 2003). Furthermore, academics tend to prefer their research over their teaching duties and may not see themselves as teachers (e.g. Elen, Lindblom-Ylänne & Clement, 2007; Postareff & Nevgi, 2015). They often lack pedagogical training, are required to teach without proper preparation (Knight, 2002; Postareff, Lindblom-Ylänne & Nevgi, 2007) and are expected, nonetheless, to develop simultaneously as researchers, teachers and supervisors (Remmik, Karm, Haamer & Lepp, 2011). These are the factors most likely to generate a range of emotions among university teachers.

Disagreement about the meaning and nature of 'emotion' makes difficult a clear definition of the concept (see Zembylas, 2002). Emotions can, however, be viewed as a fundamental component of human mental operations along with motivation and cognition. Furthermore, emotions are considered to be influenced by teachers' individual realities and also by social interactions with others and the surrounding culture (see Zembylas, 2002; Sutton & Wheatley, 2003). Emotions are typically defined as state-like

affects that are context-dependent and have a clear cause as well as a specific contextual referent, such as a particular course (e.g., Forgas, 2000; Linnenbrink & Pintrich, 2002; Löfström & Nevgi, 2013; Ketonen & Lonka, 2012; Trigwell, Ellis, & Han, 2012; Rosenberg, 1998). However, some researchers see emotions more as general responses to the world and suggest that they are more trait-like affects and, consequently, are typical of individuals (e.g., Pekrun et al., 2011). In the current study, course-specific emotions are explored and, thus, it is considered that emotions are, at least to a certain extent, context-specific. The present study focuses on exploring academic emotions which could be defined as emotions that arise in different academic settings and are directly linked to academic instruction, student learning or achievement (see Pekrun, Goetz, Titz & Perry, 2002). Researchers generally agree that emotions may be classified according to their valence as either positive or negative (e.g., Pekrun et al., 2002).

Research on emotions in university teaching has addressed the connection between teachers' approaches to teaching and their emotions. Trigwell (2012) suggested that there is a significant relationship between the ways in which teachers emotionally experience the context of teaching and their approaches to teaching. More specifically, he demonstrated that positive emotions are associated with student-focused approaches to teaching, while negative emotions are related to more teacher-focused approaches. Postareff and Lindblom-Ylänne (2011) yielded similar results suggesting that teachers adopting a learning-centred (i.e., student-focused) approach mostly described feelings of satisfaction and enthusiasm when describing their teaching.

These teachers expressed a joy of teaching and felt comfortable with their teaching duties. Teachers adopting a more content-centred (i.e., teacher-focused) approach described neutral or negative feelings about teaching and about the development of teaching. Some even described dissatisfaction and reluctance towards teaching. An earlier study by Martin & Lueckenhausen (2005) also showed that teachers with more developed understandings of teaching and learning are most emotionally affected, while confusion and anxiety characterise those who are going through a pedagogical development process. When exploring university teachers' development, Åkerlind (2003) found that teachers experienced development as an increase not only in their knowledge and skills, but also in comfort with teaching. The teachers felt more confident as teachers or they felt that teaching became less effortful as they developed (Åkerlind, 2003).

Thus, the majority of the scarce research on university teachers' emotions has focused on identifying emotions related to teaching and on exploring how emotions are related to conceptions of teaching or approaches to teaching. However, very little is known about what triggers these emotions, i.e. what the origin or source of teachers' emotions is. Lahtinen (2008) showed in a small-scale study with eight teachers that the sources of distressing elements in university teaching were generated by coping with the emotional load students placed on teachers, making pedagogical decisions in uncertain conditions and facing conflicting expectations concerning the teaching-learning process. Hagenauer and Volet (2014) identified three themes related to the emergence of emotions when studying fifteen university teachers. The first theme re-

lated to the importance of the intrinsic value and social nature of teaching as a source of emotions. Secondly, they found that emotions were triggered by the degree to which expectations of student engagement were fulfilled. Thirdly, emotions were triggered by the realisation that the professional practice of teaching was only partly controllable. Their study focused on teachers in pre-service education and all the participants displayed a high level of commitment to their work as university teachers. In the interviews, the teachers reflected on their experiences of small group teaching or one-to-one situations.

The present study focuses on the triggering elements of teachers' positive and negative emotions through analysis of interviews with sixteen teachers from six different disciplines, including both soft and hard fields. The teachers reflected upon their experiences of teaching a lecture-style course. Thus, the present study shares a theme with the study by Hagenauer and Volet (2014), but broadens the understanding of the sources of emotions as the participants come from a variety of disciplines and are not all likely to express/exhibit a high engagement towards teaching. Unlike in the Hagenauer and Volet study, the participants reflect upon lecture-style teaching. Previously, Löfström and Nevgi (2013) found that negative emotions were mostly connected with lecture settings while positive emotions were typically conveyed in seminar or group work settings. Thus, the lecture setting in the present study provides an interesting research context.

The study focuses on exploring university teachers' emotions and specifically, on identifying what triggers positive and negative emotions. Three research ques-

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tions were formulated: 1) What kinds of emotions do teachers express about their teaching? 2) What triggers these emotions? and, finally, 3) How are the triggering elements related to the teachers' pedagogical training and teaching experience? The main focus is on identifying and describing the triggering elements, as identification of emotions has been addressed in earlier studies.

Methodology

The participants were sixteen university teachers representing bio-sciences (n=3), veterinary medicine (n=2), pharmacy (n=2), mathematics (n=3), educational sciences (n=3) and theology (n=3) at a large research-intensive university in Finland. The teachers' teaching experience varied from three to 36 years. Five of the participants had not completed any pedagogical studies, while the remaining eleven teachers had completed 5-60 credits (ECTS) of pedagogical studies. Eight had participated in courses designed specifically for university teachers (university pedagogy courses), with credits completed varying from 5 to 60. Three had not participated in university pedagogy courses, but instead had completed general pedagogical studies. Two of the teachers had a formal teacher qualification (60 credits).

The interviews were conducted for the purposes of a larger research project fo-

cusing on the interaction between teaching and learning in higher education. The sixteen teachers were interviewed before and after teaching a course for Bachelor students. Thus the total number of analysed interviews was 32. The courses and the interviews took place between autumn 2009 and spring 2011. The themes of the semi-structured interviews focused broadly on issues related to teaching. In the interviews before the courses the teachers were asked to describe, for example, themselves as teachers, their commonly used teaching strategies, the most important elements in their teaching and their plans, goals and expectations concerning the course which was about to begin. In the interviews which took place after the courses the teachers were asked to freely reflect upon their experiences of teaching the course. Some clarifying questions were made depending on the teachers' responses. Emotions related to teaching were not specifically addressed in the interviews, because emotions were not the focus of the larger research project. However, it was noticed that teachers spontaneously mentioned a range of emotions while describing other aspects of their teaching.

All courses were of a lecture format and included both lectures and activating assignments for the students, although the nature of the assignments varied (e.g. activating discussions, learning diary, pre-assignments, group tasks). However, in all courses the students were expected to attend the lectures and carry out the assignments. A great majority of the courses included a final written (paper and pencil) exam at the end of the course, but two courses had an oral exam and one course was assessed on the basis of a learning diary. The number of participants in the courses varied from 25 to

over 100. The courses were worth 3-10 credits (ECTS) and lasted from 6 to 13 weeks.

The interviews were analysed using inductive content analysis, which involves a process of identifying and classifying data without any theoretical assumptions (Graneheim & Lundman, 2004; Elo & Kyngäs, 2008; Schilling, 2006). The first phase of the analysis focused on condensing the data by identifying those sections of the interviews where emotions emerged. This was carried out by each author independently and the findings were compared before proceeding to the next phase. While both identified mostly the same sections, some unclear cases demanded thorough discussion. These cases concerned the latent content of the data, i.e. emotions that were not directly mentioned by the teachers, but obviously existed. Analysis of the underlying meaning requires more interpretation than analysis of obvious components (see Graneheim & Lundman, 2004; Elo & Kyngäs, 2007). The interpretation of the 'hidden' emotions was done in collaboration with both authors. After identifying the visible and hidden emotions and what triggers these emotions, the next, second phase of the analysis was coding the data. Each emotion was given a code (e.g. satisfaction, anger etc.) and then the triggering element of each emotion was coded as well. The coding was done by both authors independently, and the outcomes were compared. The inter-rater agreement was high, but some unclear cases, for example when distinguishing between anger and frustration, required in-depth discussion before agreement was reached. The third phase focused on categorising similar codes together, meaning that similar emotions were grouped and similar triggering elements were like-

wise grouped. This phase was completed by the first author, and then checked by the second author. The categories were formed so that they would be internally homogeneous and externally heterogeneous (see Patton 1990). After reaching the final categories, the triggering elements were analysed with regard to the amount of teachers' pedagogical training and teaching experience.

Results

A range of positive and negative emotions related to teaching were identified. These emotions will be described in relation to the triggering elements. Both positive and negative emotions were triggered by similar elements, which were grouped under five categories: 1) Teaching process, 2) reflection on student learning outcomes and

experiences, 3) teacher characteristics and teaching skills, 4) student roles and activity levels and 5) interaction between teachers and students. Each of these triggered both positive and negative emotions (see Table 1).

Positive emotions were mostly triggered by students' role and activity during the course, interaction with the students as well as by the course content. On the contrary, negative emotions were mostly triggered by assessment of student learning and students' role or activity during the course. Teaching process, especially assessment, triggered numerous positive and negative emotions while other elements triggered fewer emotions. In the following each triggering element and the related emotions will be described in more detail.

Table 1. Triggering elements of emotions.

Triggering elements	Emotions
Teaching process (planning, teaching methods, assessment, course content)	Positive: Satisfaction, enthusiasm, excitement, sense of competence, feeling comfortable, surprised (positively), attachment, love Negative: Dissatisfaction, frustration, uncertainty, worry, surprised (negatively), anxiety, shame, comfortable
Students' learning outcomes and experiences	Positive: Satisfaction, proud Negative: Dissatisfaction, disappointment
Teacher characteristics and teaching skills	Positive: Satisfaction, enthusiasm Negative: Nervousness, anxiety
Students' role and activity	Positive: Satisfaction, excitement Negative: Frustration, worry, disappointment, annoyance
Interaction between teacher and students	Positive: Satisfaction, enthusiasm, excitement Negative: Uncertainty, dissatisfaction

Emotions triggered by the teaching process

Emotions were mostly triggered by elements related to the teaching process, i.e. planning of teaching, teaching methods and assessment of student learning. In particular, assessment of learning triggered both positive and negative emotions, though most of these were negative. In addition, the content of the course or topic of teaching was placed in this category. Emotions triggered by the teaching process were described both in the interviews conducted before and after the courses, but emotions related to planning of teaching were mostly described before the courses and emotions related to assessment of learning were mostly described after the courses.

A few teachers mentioned *planning of teaching* as a triggering element of positive emotions. They described planning the courses carefully, which made them feel safe and competent about the course. One teacher described planning the course partly with her students, which made her feel very enthusiastic about the course. In some cases, *teaching methods* were credited with generating positive emotions. The teachers described that they liked the method they applied in the course or that they felt comfortable with adopting the specific method. Usually these concerned including some activating and student-centred elements into the lectures. One teacher described having considerable interaction with the students during a lecture. The teacher continued to say that *'there is always this special kind of glamour in giving a lecture.'*

Furthermore, *assessment of student learning* generated positive emotions. These were mostly related to being sat-

isfied with the assessment procedure or specific assessment methods of the course. For example, one teacher tried for the first time a new, innovative assessment method, and she describes her satisfaction as follows:

'The exam was a really nice experience. I had such a good feeling after that.'

Positive excitement or enthusiasm was often triggered by the *content of the course*. Some teachers taught their own research area, and they described being attached to this topic or loving to teach that topic to the students. One teacher expressed his enthusiasm as follows:

'The topic of the course fascinates me and I am extremely enthusiastic about it.'

Negative emotions were frequently triggered by *assessment of student learning*. Almost all teachers described some challenges related to assessment, which generated these negative emotions. Some teachers were negatively surprised as they noticed that the assessment in the course did not measure students' deep understanding, but, instead, memorization. Some felt anxious about giving grades to students, and one teacher expressed being worried about the trend of giving the final course grade on the basis on one exam at the end of the course. One teacher expressed being ashamed because he noticed that he had given grades to the students in an unreliable manner:

'Now I feel ashamed. Again, I have given too many points to this student.'

The negative emotions were in some cases triggered by not investing enough time or effort into *planning of teaching*. This generated dissatisfaction or frustration among some teachers. The *teaching method* of lecturing often triggered nega-

tive emotions. Some teachers do not feel comfortable lecturing to a large audience and some were frustrated with lecturing after utilising the same method for several years. Some described uncertainty or worry about the appropriateness of the teaching methods they applied or about how deeply the students had learned the course content. In the following quotation the teacher's uncertainty about the teaching method is evident:

'I'm not sure if I should have given more assignments to the students... I don't have a clue if the students were able to learn all the relevant information, because it was pure lecturing.'

Emotions triggered by reflection on student learning outcomes and students' experiences

The source of positive emotions was often related to teachers' reflection on his or her student learning outcomes or on their experiences of the course. These emerged from the interviews which were conducted after the courses. Some teachers felt satisfaction after noticing how much/successfully their students had learned during the course or seeing how students were able to participate in critical or analytical discussion. In many cases, positive feedback from students triggered satisfaction, such as in the case of one teacher who mentioned feeling proud of the feedback he received. In the following, a teacher describes his satisfaction of collecting/receiving positive feedback from students:

'I received positive feedback from the students. Although I am used to receiving positive feedback, it feels brilliant and it means very much to me.'

The negative emotions triggered by teachers' reflections on student learning

outcomes concerned dissatisfaction with how the students were able to learn the course content. Some teachers felt disappointment when noticing that some students were not able to show high quality learning outcomes. Student feedback was not related to any negative emotions. Some teachers mentioned that they have received some negative feedback, but they described using it to develop their courses.

Emotions triggered by teacher characteristics or teaching skills

Teachers expressed positive emotions that were triggered by their own characteristics as a teacher or their teaching skills. These were described both in the interviews conducted before and after the courses. These participants mentioned that they are satisfied with their teaching or that they like teaching or feel enthusiastic about teaching the course, because their attitude towards teaching is positive and they invest a lot of time and effort in it. In the following, one teacher describes his characteristics as a teacher and the enjoyment he feels:

'I have always liked teaching, and I am looking forward to this course. I think it will go well. I think my attitude towards teaching is more positive than usual among university teachers.'

The negative emotions triggered by the teacher's own characteristics or skills were related to nervousness or anxiety about teaching. Two teachers described feeling nervous about teaching the course, which they were teaching for the first time; they pondered whether they have the required skills to teach the course. Another teacher described how he easily gets too excited and proceeds too fast.

Emotions triggered by student roles and activity levels

Some of the positive emotions were triggered by student roles and activity levels. These emerged mainly from the interviews conducted after the courses. Some teachers reported satisfaction when students worked together and supported each other during the course. Satisfaction with students' activity levels or enthusiasm during the lectures was also mentioned by some teachers. One teacher described feelings of satisfaction when he sees his students working with each other in the corridors. Another teacher described feelings of excitement and satisfaction when talking of his students:

'It is great to get in touch with the smartest of the smart young people. In the previous course the students had really invested time and effort in studying.'

Student roles and their activity level during the courses also triggered negative emotions. Teachers described being frustrated or disappointed in the students' low levels of activity in the course, and one expressed worry that the students' study morale has decreased. One teacher described disappointment that the students did not show much interest in the course content. The same teacher also described feeling annoyed with the students' arrogant attitude during the lectures. This teacher describes his emotions as follows:

'For the first time in my career I had this unpleasant feeling, because I felt that I needed to consider carefully what I said, because some students got easily annoyed. There were, if I may say, some very rude students. Some were smart, but the fact is that there are some people who don't have much common knowledge.'

Emotions triggered by interaction between teacher and students

Positive emotions were often triggered by interaction between the teacher and his/her students. These were mainly described in the interviews which took place after the courses. These teachers described satisfaction related to genuine contact with students or when succeeding in promoting enthusiasm among students through interaction. Some stated that they gain a lot from discussions with their students. One teacher described a high level of enthusiasm saying that *'the discussions with the students were great'*, and it was easy to interact with that group of students. Another teacher described feeling excited when forming a close relationship with the students:

'I was able to create a nice community with the students. We were like an old-fashioned class or group... That was exciting.'

Only a few of the teachers expressed negative emotions generated by interaction with the students. These teachers described being uncertain about how well/successfully they interacted with the students during the course, as the following quotation shows:

'It's weird that you never know if it (interaction) will work or not. Sometimes it works, and sometimes it feels like you are carrying stones. Sometimes I get completely lost, because I don't know how I can make it work.'

Dissatisfaction in some cases was generated by a low level of interaction with the students. Some believed that the students did not want to interact with the teacher, and some did not consider themselves capable of creating opportunities for interaction.

Triggering elements in relation to pedagogical training and teaching experience

The five teachers with no pedagogical training differed in some respects from the eleven teachers with either university pedagogy training or general pedagogical training. Most evidently, teachers with no pedagogical training more often identified student roles and activity levels as a source of negative emotions. They more often felt that their students failed to take an active role during the courses and aimed for passing with minimal effort:

‘Many students try to struggle through the courses on the basis of their knowledge from previous courses. They come to the course and try if they could pass it without doing much of anything.’

On the contrary, for teachers who had pedagogical training student roles and activity levels more frequently triggered positive emotions. In the following quotation a teacher with 20 credits of university pedagogy courses describes his students’ activity:

‘Very often I ask the students to ponder things with their peers, because I know that they have really good discussions. I know that they study a lot with other students outside the classroom as well, and that is something really great.’

Moreover, teachers with no pedagogical training encountered negative emotions more in their interaction with students. They expressed uncertainty of how to initiate interaction with the students and felt that it was difficult to get students involved in discussions. One teacher with no pedagogical training describes his challenges as follows:

‘It is sometimes frustrating to try to activate students to express their own opinions or so. What I have noticed is that there are usually two or three students who say something and the rest of them don’t say nothing, nothing at all.’

For teachers with pedagogical training, on the other hand, interaction with students triggered mostly positive emotions. In particular, those teachers with 30 pedagogy credits or more emphasised the importance of interaction with students, which was, for them, a major source of positive emotions. The following quotations shows how a teacher having 60 credits of university pedagogy courses describes enthusiasm of having discussions with her students:

‘Having discussions with students was the best part of the course. Together with the students we were able to get much more out from the texts than what I could have done on my own... You never know what the outcome will be, but it will provide different perspectives.’

No other clear distinctions in the triggering elements between teachers with or without pedagogical training could be identified, but a larger sample size might illuminate further differences.

With regard to teaching experience, no differences could be detected. Those who were teaching a course for the first time described more nervousness and doubted their own skills, but these teachers already had several years of teaching experience from other courses. Thus, teaching new courses generated negative emotions in teachers, regardless of the span of their teaching experience.

Discussion

The same elements were identified as triggering both positive and negative emotions. However, some differences were detected in that student roles and activity levels during the courses, interaction between the teacher and the students and the content or topic of the course more often triggered positive emotions. Hagenauer and Volet (2014) similarly found that when teachers see social value in their teaching it is likely to generate positive emotions. Löfström and Nevgi (2013) observed that positive emotions expressed by university teachers often relate to descriptions of students as familiar, with distinct personal features and located in close proximity to the teacher. This likely explains why the teachers who included some student-activating elements and interaction in their teaching described positive emotions in relation to their teaching methods, while negative emotions were more often generated by pure lecturing. Furthermore, Löfström and Nevgi (2013) showed that positive emotions were typically conveyed in seminar or group settings while neutral or negative emotions were mostly related to lecture settings.

On the contrary, negative emotions were most often triggered by assessment. This seemed to be related to the teachers' lack of awareness of appropriate assessment methods and grading, and to lack of competence to carry out assessment in a meaningful and appropriate manner. This result supports the findings suggesting that teachers' negative emotions are often generated by decision-making in uncertain conditions (Lahtinen, 2008). Both those teachers with and without pedagogical training experienced negative emotions with assessment. This was likewise a

finding of previous studies emphasising that assessment is considered challenging even by teachers who have invested time in developing their own teaching and have sophisticated conceptions of assessment and teaching (Postareff et al., 2012). The result of this study confirms that in developing teaching, more emphasis should be placed on questions related to assessment, as teachers frequently report challenges in conducting assessment appropriately.

Negative emotions were also often triggered by student roles and activity levels. Some teachers felt/believed that students were reluctant to take an active role, while others, especially those with no pedagogical training, considered themselves lacking the skills to activate students and support them as active agents in the teaching-learning process. This result shares similarities with a previous finding that emotions were triggered by the degree to which expectations of students' engagement were fulfilled (Hagenauer & Volet, 2014). The teachers with no pedagogical training assigned negative emotions more often to the interaction between the teacher and students than did the teachers with pedagogical training. The latter seemed to lack the required knowledge and tools to create opportunities for interaction. The results are supported by previous findings that negative emotions typically arise when there is a greater distance between the teacher and the students and when students remain a faceless crowd (Löfström & Nevgi, 2013). Lahtinen (2008) found that negative emotions were often generated by the emotional load students placed on teachers. In our study, some teachers also reported that student behaviour during the lectures aroused negative emotions.

Emotions related to student roles and activity levels were described more often than emotions related to teacher characteristics or teaching skills. In particular, negative emotions related to teachers' own professional/teaching characteristics were seldom expressed, highlighting that emotions related to our own actions are not easily expressed. This might be because such emotions are often considered out-of-control and primitive, as well as incompatible with academic behaviour, as suggested by Sutton and Wheatley (2003). Emotions related to teacher characteristics or teaching skills might therefore remain implicit if not dealt with consciously. In academic development programmes, the role of emotions should be brought up in order to make them more explicit and to support academics in coping with their work-related demands and stress. Reflection has been shown to be key in developing awareness of personal values and preferences, and behaving genuinely and openly as a teacher and, furthermore, being more passionate about teaching (Cranton & Carusetta, 2004). A fluent connection between reflection and action among university teachers is imbued with enthusiasm and satisfaction. Enjoyment of work has been shown to become apparent when teachers are able to live up to their pedagogical views and values (Mälkki & Lindblom-Ylänne, 2012).

In many cases, negative emotions seemed to be related to a lack of pedagogical awareness or competence. Such findings are in line with previous studies showing that teachers who adopt a learning-focused approach to teaching and have often participated in pedagogical courses express more positive emotions related to teaching and the development of teaching, while teachers with a more

Attention should be payed on how teachers can enhance the interaction with their students.

content-focused approach, usually unaccompanied by pedagogical training, express neutral or negative emotions (Postareff & Lindblom-Ylänne, 2011; Triggwell, 2012; see also Löfström & Nevgi, 2013). When teachers see intrinsic value in their teaching it is likely to generate positive emotions (Hagenauer & Volet, 2014).

The challenge of the present study was that many of the emotions were not described directly, but rather were hidden behind teachers' descriptions of their teaching. Teachers have been shown to tend to hide their actual emotions (e.g. Zhang & Zhu, 2008) and therefore it was considered that asking teachers directly about their emotions in the interviews might not reveal the whole range of their emotions. Researchers have found that measuring emotions qualitatively and indirectly reduces misinterpretations and enables exploration of emotions that participants are unaware of (Jostmann, Koole, van der Wulp & Fockenberg, 2006). Thus, interpreting the latent might result in more reliable results, although interpreting these hidden emotions required careful analysis and discussions among the researchers.

The present study showed the importance of relating emotions with what triggers them. This is especially important in finding ways to promote teachers' positive emotions. The range of emotions teachers are likely to face during their teaching and recognising what triggers

these emotions are central topics to be included in pedagogical courses organised for university teachers or other development initiatives which aim at development of teaching. Teachers should be supported in developing their reflective skills to identify their own teaching-related emotions and the sources of them. The present study showed that a majority of positive emotions were triggered by situations where the teachers were able to get a contact to their students and to activate their students through their own teaching or assessment. Thus attention should be paid on how teachers can enhance the interaction with their students and ways to activate their students in order to gain positive experiences of teaching. In addition to these practical implications, the theoretical implications address the importance of addressing emotions as a central component of teaching along with the cognitive and motivational aspects of teaching.

Our future studies will focus on analysing emotions from a more individual perspective. The aim will be in addressing individual teachers' profiles in terms of their emotions and the amount and type of pedagogical training. This will allow deeper examination of differences between teachers with varying amount of pedagogical training. Disciplinary differences should also be further examined, which was not possible with the limited number of teachers per discipline in the present study.

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