Feel the Progress: Second-year Students' Reflections on Their First-year Experience

Telle Hailikari[1], Robert Kordts-Freudinger[2] & Liisa Postareff[1]

[1] University of Helsinki, Finland

[2] Paderborn University, Germany

Correspondence: Telle Hailikari, University of Helsinki, Helsinki, P.O. Box 9, 00014 University of Helsinki, Finland. Tel: 358-50-353-4489

Received: June 6, 2016 Accepted: June 23, 2016 Online Published: June 24, 2016

doi:10.5430/ijhe.v5n3p79 URL: http://dx.doi.org/10.5430/ijhe.v5n3p79

Abstract

The aim of the present study was to explore first-year students' academic emotions and how they relate to their study progress. A mixed-method approach was used. The data consisted of deep interviews with 43 students. The number of their study credits was used as an indicator of their study progress. The results revealed that students expressed a wide variation of emotions. In addition, the study found significant relations between students' emotions and study progress. Results show that slow and fast-pace students significantly differed from each other regarding their emotional experiences. Slow pace students experienced significantly more negative emotions than fast pace students. Slow and fast pace students differed especially regarding their feeling of competence. The implications of the study are discussed.

Keywords: Emotions, Study progress, First-year students

1. Introduction

The transition to university is challenging for many students (e.g. McMillan, 2014), because the new academic learning environment requires more independent and effective approaches to studying (Christie, Barron & D'Annunzio-Green 2013). The new demands and pressure of the 'alien environment' (Askham, 2008) is likely to evoke a variety of emotions, both positive and negative, among the students. Even though researchers today share a common understanding that emotions play an important role in learning (e.g., Linnenbrick & Pekrun, 2011; Pekrun & Stephens, 2010), there is a scarcity of research on how emotions are related to students' study progress. Whereas previous studies have investigated into variables that relate to study progress (e.g., Duff, 2004; Hailikari & Parpala, 2014; Rytkönen, Parpala, Lindblom-Ylänne & Postareff, 2012; Van den Berg & Hoffman 2005), there is a lack of research on the subjective, experiential, correlates of study progress. Understanding the role that emotions play in study progress is important in order to better support students in their studies. Previous research has shown that there are many differences between students that progress slowly in their studies and students that progress fast in their studies (see e.g., Lindblom-Ylänne, Haarala-Muhonen, Postareff & Hailikari, 2016; Lindblom-Ylänne, Saariaho, Inkinen, Haarala-Muhonen & Hailikari, 2015). Therefore, it may be assumed that slow and fast-pace students also differ regarding their emotional experiences of their first study year.

The focus of the present study is, first, to explore the emotional landscape of first-year students and, second, to explore the emotional differences between slow and fast-pace students.

1.1 Academic Emotions

There are various levels on which academic emotions have been conceptualised in the research thus far. Emotions are typically defined as state-like affective experiences that are more or less dependent on the context, and usually have a clear cause as well as a specific contextual referent, such as an exam or a particular course (e.g., Forgas, 2000; Ketonen & Lonka, 2012; Linnenbrink & Pintrich, 2002; Rosenberg, 1998; Schwarz & Clore, 1996; Trigwell, Ellis, & Han, 2012). However, some researchers see emotions as affective traits that describe more general responses to the world, which vary by person and are quite typical of individuals (e.g., Pekrun, Goetz, Frenzel, Barchfeld & Perry, 2011). For example, it has been shown that personal traits explain over a third of human emotions (Yik & Russel, 2001). Wittman (2011), in turn, explored teacher trainees' learning-related emotions on a general level, longitudinally

over time, and found that the positive and negative emotions associated with learning seemed to remain rather stable. Pekrun et al. (2011) explored typically experienced student emotions in a semester-long course over a lengthy period of time, defining emotions on a continuum between trait and state.

It is commonly agreed among researchers that emotions may be classified as either positive versus negative, or pleasant versus unpleasant, according to their experienced valence (e.g., Pekrun, Goetz, Titz & Perry, 2002). Many studies focus on the valence dimension so as to reduce the conceptual complexity (Pekrun et al., 2002). Positive emotions include joy and enthusiasm, for example, and negative emotions include anxiety, anger and frustration. In contrast to this broad consensus about the valence dimension, there is still an ongoing debate about an independent activation or arousal dimension. Some researchers have argued that activating negative emotions (e.g., shame) should be dinstinguished from deactivating negative emotions (e.g., Feldman Barrett & Russell, 1998; Pekrun et al., 2002). Others, however, question the existence of a general independent activation dimension (e.g., Schimmack & Grob, 2000; Terracciano, McCrae, Hageman & Costa, 2003). The present study will therefore be restricted to the valence dimension alone.

1.2 Emotions, Study Success and Study Progress

Pekrun et al. (2011) suggest that strong positive emotions affect students' self-regulation and learning strategies in a positive manner, and thus contribute to better academic success. On the other hand, negative emotional experiences have been reported to reduce academic performance, because they decrease motivation and may direct attention away from a task (e.g., Lewis, Huebner, Malone & Valois, 2011). Trigwell, Ellis and Hahn (2011) found that the deep approach to learning correlated with positive emotions and that the surface approach correlated with negative emotions. These results imply that academic emotions are likely to be related to students' study progress, because good self-regulation skills and effective study strategies are likely to result in faster study progress. However, the relations between emotions and study progress have not been specifically addressed in previous studies, although research has explored relations between study progress and several other variables.

For instance, previous studies have shown that students' study progress is affected both by student variables and contextual variables. Van den Berg and Hofman (2005) showed that a large amount of variance of study progress could be explained by student variables, such as their use of time. Hailikari and Parpala (2014) found that effects of the learning environment were mediated by students' learning processes. Spending time with paid work, for instance, decreased study progress only if the students did not have good organising skills (Hailikari & Parpala, 2014). More generally, research informs us that the fast progressing students may have more positive experiences about their studying than the other students. For instance, Haarala-Muhonen, Ruohoniemi, and Lindblom-Ylänne (2011) found that fast progressing students showed higher motivation and stronger self-efficacy beliefs than the slow-pace students. Another study by Lindblom-Ylänne, Haarala-Muhonen, Postareff and Hailikari (2016) showed that fast progressing students in general had positive study experiences. Similarly, Boekaerts (2007) suggests a relationship between the way students regulate their studying and the emotions they experience. Students who take responsibility for their studies and monitor their studies are more likely to be optimistic about their studies and less likely to feel anxious or ashamed. On the other hand, there is evidence that students who procrastinate and proceed slowly in their studies have less positive experiences of their studies (Lindblom-Ylänne, Saariaho, Inkinen, Haarala-Muhonen & Hailikari, 2015). In a recent study, Lindblom-Ylänne et al. (2016) showed that fast-progressing students are not a homogeneous group, but that it is possible to identify a profile of students who progress fast but strenuously and who feel strained and anxious.

1.3 The Present Study

The present study explores emotions of beginning second-year students employing an indirect measure. The indirect measure was adopted in order to capture the whole variation in the emotions that the students' express. The scope of students' academic emotions reported in the literature is still quite limited and there are some indications that students' emotional experiences in academic activities are likely to be richer than prior studies have suggested (Pekrun, 2005). Loneliness, for instance, is also likely to be experienced in academic settings, although it has not been reported in previous studies on academic emotions among higher education students (Häkiö, Pyhältö, Pietarinen & Soini, in press).

Most research on students' academic emotions so far have used direct and quantitative measures: Participants focus their attention on the emotions specified in a questionnaire and evaluate their own experience and quantify their response on scales. The Test Emotions Questionnaire (TEQ; Pekrun, Goetz, Perry, Kramer, Hochstadt & Molfenter, 2004) and the Achievement Emotions Questionnaire (AEQ; Pekrun et al., 2011) are among the best known and most widely used questionnaires in research on students' academic emotions. Direct measures, however, have several

disadvantages when exploring emotions. First, direct measures can be subject to social desirability. For instance, many studies with emotion questionnaires show that participants indicate that they experience positive emotions more often than negative emotions (e.g., Watson, Clark & Tellegen, 1988). This finding could indicate that participants typically overestimate their positive and underestimate their negative emotional experience. Chen, Dai, Spector and Jex (1997), for instance, found positive correlations between a social desirability scale and the Positive Affect scale of the Positive And Negative Affect Schedule (PANAS; Watson et al., 1988) and negative correlations between social desirability and the Negative Affect scale (Chen et al., 1997). Second, direct measures typically require the conscious recognition and the awareness of one's own emotional states. This experiential awareness, however, could be impaired if the emotional state lays outside of conscious awareness (e.g., Berridge & Winkielman, 2003; Custers & Aarts, 2005). Third, existing questionnaires on academic emotions focus on specific emotions such as anxiety, fear, joy or boredom (e.g., Pekrun & Stephens, 2010; Pekrun et al., 2002, 2011). This top-down procedure, where students are asked if and to what extent they experience specific emotions, however, can lead researchers to miss important emotions that not measured through the questionnaires. In addition, students might interpret the labels of the emotions in different ways and thus report emotions which they actually have not experienced (see Quirin, Kazen, & Kuhl, 2009).

An alternative to using direct measures is to adopt indirect ways to explore a phenomenon. Researchers have found that measuring emotions in an indirect way qualitatively affords several benefits. First, it overrides intentional distortion and thus reduces the possibility of reporting more positive emotions than students actually have experienced. Second, it ensures that emotions can be measured even if the participants are not completely aware of their emotional states (e.g., Jostmann, Koole, van der Wulp, & Fockenberg, 2006). Third, it enables to explore the broad range of emotions students experience through allowing respondents to describe their feelings openly. This qualitative procedure also makes use of the variation of the different ways of understanding and of the labels that individuals assign to emotional experiences (see Quirin, Kazen, & Kuhl, 2009). Some previous studies using indirect measures to explore emotions in higher education have used the interview method for this end, including conducting interviews with students (e.g., deMarrais & Tisdale, 2002; Eynde, De Corte, & Verschaffel, 2001; Pekrun et al., 2002;).

This study analysed the emotions expressed in interviews conducted with fast and slow-pace students after their first year at the university. Based on the literature, we assumed a systematic variation between the two groups with respect to their emotions. The following research questions were formulated:

Research Question 1: Which emotions do beginning second-year students report when describing their first year of studying?

Research Question 2: How do fast and slow-pace students differ in the emotions they report when describing their first year of studying?

2. Method

The present study adopts a mixed-method approach, in order to gain a deep and broad understanding of the phenomenon under study (e.g., Johnson, Onwuegbuzie & Turner, 2007). We first applied a qualitative approach to analysing emotions, and then expanded the findings quantitatively (see Creswell, 2013).

2.1 Participants

The sample consisted of 43 students (77% female, 23% male) who were enrolled in three Bachelor of Arts undergraduate programmes (Faculty of Arts and Humanities) at a large research-intensive university. These students were just starting the second year of their studies, their mean age was 24 years (range 20-36 years). We applied purposive sampling and invited students who had progressed slowly and those who had progressed fast during their first year in order to ensure a wide variability of progress within the sample. Twenty of the students were slower than average, i.e. they had obtained fewer than 36 credits during their first year, and lacked at least a quarter of the credits the university expects students to earn during each academic year. Those who obtain fewer than 46 credits are required to submit a report to the university regarding their slow study pace, and to draw up a detailed plan for the future. The limit of 46 credits is also the minimum requirement for receiving the government-financed study grant, which is an important benefit available to all students. Twenty-three students progressed more quickly than average, i.e. they obtained more than 67 credits during their first year of study.

2.2 Materials

The participants were interviewed after their first study year. The interviewers asked the students 12 questions about three broad themes: Experiences of the first study year, students' aims and study processes, experiences of the

teaching-learning environment, and especially factors that had enhanced or impeded their studying. Interviewers did not specifically ask the students about their emotions, but focused instead on their views, evaluations and experiences during their first year. The first author acted as the interviewer. The length of the interviews varied from approximately half an hour to an hour. They were transcribed verbatim and the selected extracts were then translated into English, so that the extracts do not represent authentic spoken English.

2.3 Analysis

We used qualitative content analysis based on inductive reasoning in order to identify any descriptions referring to emotions. First, we read through all the interview transcripts thoroughly to become familiar with the data. We then coded all the text sections including descriptions of emotions or feelings. Any description related to emotions, whether explicitly (e.g., "I was very frustrated") or metaphorically (e.g., "it's like hanging by a thread all the time") expressed, was included in the analysis and was listed independently by the first and the third author. We included metaphorically expressed emotions in order to include those emotions of which participants were not consciously aware of (Jostman et al. 2006; Quirin et al., 2009). The authors coded these emotions and cross-validated each other's interpretations. All the coded emotions were thoroughly discussed and any disagreements were negotiated until consensus was reached. The preliminary codes were defined and combined several times before the final codes were formed. The first phase of the analysis eventually produced 61 codes. These codes were grouped in two categories during the second phase, based on their valence: a) positive emotions and b) negative emotions. Similar positive emotions were grouped together, resulting in nine broader categories. A similar procedure was followed with negative emotions, resulting in 12 broader categories.

After establishing the categories of emotions, we examined the differences in these experiences by slow and fast-pace students. To do this, the categories were coded as dummy variables and entered into an SPSS file. First, the frequency and percentage of each negative and positive emotion were counted for slow and fast pace student groups. After this, the summative positive and negative emotion variables were compared between the fast and the slow-pace students by means of Chi Square tests that compare the actual with the expected frequency of sample sizes in the cells (see below).

3. Results

3.1 Emotions of Fast and Slow-Pace Students

The first research question concentrated on identifying the emotions that the first-year students expressed when describing their first year of studying. The analysis revealed a range of emotions. Altogether 61 emotion expressions were identified, including 25 positive and 36 negative emotions. Similar emotional expressions were grouped together into broader emotion categories. For instance, feeling enthusiastic, inspired or excited, and being interested in one's own field and having the will to learn, were included in one main category 'enthusiasm and interest towards own field'. Following this procedure, nine main categories for positive emotions and 12 main categories for negative emotions emerged. The most frequently reported emotions were positive feelings of satisfaction and contentment as well as enthusiasm and interest. Among the negative emotions, dissatisfaction, confusion and anxiety were reported most often. The different emotion categories, their descriptions and frequencies are presented in Table 1.

Table 1. Emotion categories and their description

Emotion categories	Description of the category	f
Positive emotions		
Satisfaction and contentment	liking something, being satisfied with and feeling positive about something	42
Enthusiasm and interest towards own field	feeling enthusiastic, being interested in own field, feeling inspired or excited, having the will to learn and feeling enthusiastic about major subject	40
Enjoyment of learning and studying	liking or enjoying studying and learning, and having the willingness to learn	22
Feeling positively surprised	descriptions related to experiencing something unexpected as positive	19
Feeling of competence	feeling competent concerning one's own abilities or skills as a student, descriptions related to feeling at ease when studying	18
Joy	happiness with the own study success, feeling happy more generally during the first year (e.g., new acquaintances, social events)	17
Relief	being relieved about getting exams done; easing of confusion about university studies and future goals	7
Pride	feelings of gratitude and pride about getting into the university and being able to study there	6
Hope	being hopeful of something or hoping for something, for example, hope that it would get easier with the studies in the future	3
Negative emotions		
Dissatisfaction	Not liking the studies in general, being disappointed, feeling a grudge, and feeling bored or discouraged.	32
Confusion	feelings of being overwhelmed and uncertain by their studies, questioning own field	30
Anxiety/stress	descriptions related to nervousness, feeling stressed out and being anxious about too heavy a workload	27
Frustration or annoyance	frustration about studies, such as overlapping courses or the way studies were organized	19
Feelings of incompetence	feelings of inadequacy, feeling stupid and incompetent, or at the strongest level, feeling like a loser	11
Feeling shocked	'culture shock' of moving from secondary school to university, including surprise at the extent of self-directedness that was required.	9
Tiredness	feeling tired and experiencing the workload at university as being too heavy	8
Worry or fear	concern about future employment opportunities or combining work life/family life with studying, and a fear of not being able to cope with the studies	7
Feeling of detachment from studies	not having chosen the right major subject and not feeling committed to university studies, or references to a lack of motivation	6
Loneliness	alienation from the student community, and a sense of not belonging or not having friends at university	4
Anger	Explicit expressions of anger about the way studies were organized	3
Feeling depressed	Explicit expressions of being depressed about something or having been diagnosed with depression that was serious enough to affect studying	2

3.2 Emotional Differences between Slow and Fast Pace Students

Next, we set out to explore the differences between slow and fast-pace students. Table 2 presents groupwise frequencies and percentages in more detail. It indicates that slow-pace students expressed more negative emotional experiences than fast progressing students. In order to test this impression, the summative positive and negative emotion variables were compared by means of Chi Square tests. The tests revealed that the groups of students differed significantly with respect to negative emotions, Fisher's exact test = 16.38, p = .02, but not to positive emotions, test statistic = 9.85, p = .13.

All in all, as Table 2 indicates, slow-pace students expressed a wider variety of negative emotions than fast-pace students. Altogether five categories of negative emotions were expressed solely by slow-pace students: feeling of incompetence, loneliness, depression, anger and feeling of detachment from studies.

Table 2. Emotions expressed by slow and fast-pace students

Emotion	Slow (N = 20) (N %)	Fast (N = 23) (N %)	p value comparison (Fisher's exact test, two-sided)
Satisfaction	19 (95%)	23 (100%)	.47
Enthusiasm/Interest	18 (90%)	22 (96%)	.59
Enjoyment of learning	7 (35%)	15 (65%)	.07
Feeling of competence	4 (20%)	14 (61%)	.01
Surprised	9 (45%)	10 (44%)	> .99
Joy	8 (40%)	9 (39%)	> .99
Relief	3 (15%)	4 (17%)	> .99
Pride	3 (15%)	3 (13%)	> .99
Hope	2 (10%)	1 (4%)	.59
Dissatisfaction	16 (80%)	16 (70%)	.50
Confused/uncertain	16 (80%)	14 (61%)	.20
Anxiety/stress	15 (75%)	12 (53%)	.21
Annoyed/frustrated	11 (55%)	8 (35%)	.23
Feeling of incompetence	11 (55%)	0	< .01
Tiredness	7 (35%)	1 (4%)	.02
Shocked	7 (35%)	2 (9%)	.06
Feeling of detachment from studies	6 (30%)	0	.01
Worry	5 (25%)	2 (9%)	.22
Loneliness	4 (20%)	0	.04
Anger	3 (15%)	0	.09
Depression	2 (10%)	0	.21
Expressions altogether	176	156	
Positive expressions	73 (41%)	101 (65%)	
Negative expressions	103 (59%)	55 (35%)	

Fisher's exact test revealed that the slow and fast-pace students differed most strongly from each other (p < .10) regarding these following emotions: *Feeling of competence/incompetence, surprise/shock, tiredness, noncommitment/detachment, loneliness, anger* and *enjoyment of learning.* The following paragraphs will describe these emotions in greater detail, starting with the negative emotions. Examples of each emotion are given.

Over half (61%) of the slow-pace students expressed feelings of incompetence whereas none of the fast progressing students did so. The following paragraph quotes an example of a slow-pace student expressing feelings of incompetence:

> *"I just feel as if this is too difficult for me. That at times my level [of competence] just isn't enough --- So now I'm just afraid that if that happened during the first year, and if I continue studying will I be able to survive... I just have to try."*

Slow and fast-pace students also differed in their experiences of being shocked or negatively surprised by the university. Up to 33% of slow-pace students expressed feeling shocked regarding their transition to the university whereas only 12% of the fast progressing students expressed such shock. The next quote illustrates the feeling of being shocked:

> *"I came straight from the high school, so in the beginning I was really shocked because there was not so much contact teaching. I was in panic that I'm not studying at all but then I realised that studying is up to me and the teacher is not there to force you to do something. But in the beginning when you were told to write a ten-page essay, I was like oh my God, I don't know that much about anything!"*

Up to 39% of the slow pace students expressed tiredness regarding their studies whereas only 4% of the fast progressing students expressed such emotions. Expressions of tiredness often referred to feeling stressed and tired and experiencing the workload at the university as being too heavy.

> *"The fall semester went really well, but then in December I started working and there were still a couple of weeks left of the semester and then of course there were all these deadlines and exams and everything at the same time. And I was just so tired that I just couldn't handle all the essays so I left them hanging and that sort of started the vicious circle--- and that was it, my enthusiasm sort of waned because of all the undone work"*

Interestingly, a third of the slow progressing students reported feelings of detachment to their studies whereas none of the fast students reported such feelings. The following paragraph quotes a typical example of a student who questions whether university is the right place for him/her:

> *"--- lately I have thought a lot about studying at the university and whether I should continue studying here or just go elsewhere and do something totally different"*

Regarding the less frequently expressed emotions, some slow-pace students (12%) expressed feelings of loneliness. Their percentage was not very large, however, it was three times the one for the fast progressing students (4%). Expressions of *loneliness* concerned alienation from the student community, and a sense of not belonging or not having friends at university.

> *"I didn't really find any friends [at the university]. In the beginning we spent time together with the tutor group but at some point half of them didn't even say hi to me anymore, so I felt like I don't even want to go there [to the university] because there is nobody there"*

Anger was rarely mentioned and if so, it was only mentioned by slowly progressing students (15%). Anger was directed towards the way studies were organized, which were considered useless for the students. Anger was always expressed strongly and explicitly:

> *"Then [after all the hassle with the registrations] I was just so pissed off that I didn't want to take any more courses."*

Regarding the positive emotions, the differences between slow and fast pace students were not as pronounced as regarding the negative emotions. However, there were some differences regarding the experiences of enjoyment of learning and feeling of competence.

Almost two-thirds (60%) of the fast progressing students reported enjoyment of learning compared to 39% of the slowly progressing students. The next paragraph quotes a fast progressing student, describing how learning by itself is fulfilling for him/her:

> *"I love to study and learn new things and it's like I have always said to my parents and everyone else that if I could get paid for studying, I would study forever"*

A much higher proportion (60%) of the fast compared to the slow-pace students (17%) expressed feelings of competence. The following quotation by a fast progressing student reflects a strong feeling of competence and a highly positive image as a learner:

> *"I have always been a really good and conscientious student, some might even say that I'm a bookworm but I have been like that since childhood. Studying is just really easy for me."*

The groups did not differ with respect to any other positive emotion.

4. Discussion

The aim of the present study was twofold. First, we set out to explore which emotions students report when they retrospectively describe their first year of studying by using an indirect research method. Second, we aimed to test whether fast and slow-pace students differed in the emotions they reported.

Concerning the first aim, the study revealed that the first year of studying was an emotionally-charged experience. Students described a wide variety of emotions in the interviews. All in all, a wider variety of negative emotions were described, with dissatisfaction, anxiety and confusion being the ones that were most frequently reported. This finding underlines the importance given to these emotions in previous research (e.g., Pekrun et al., 2004). The wider variety of negative emotions also reflects the argument put forward in previous studies that there are fewer positive emotions than negative ones (e.g., Ellsworth & Smith 1988). Another reason why the students expressed a wider variety of negative emotions could reflect the nature of the interviews: If students are not specifically asked about their emotions they may more readily express negative as opposed to positive emotions. The students we interviewed were given the opportunity to talk openly about their experiences during their first year at university, which might have provoked them to focus on negative experiences and emotions. In addition, researchers have also stated that negative emotions are more easily explicated than positive ones. The results may reflect this issue, too (e.g., Ekman, 1992; Häkiö et al., in press).

Concerning the second aim, results show that slow and fast pace students significantly differed from each other regarding their emotional experiences. Slow-pace students experienced significantly more negative emotions than fast pace students. The transition to the university might have been a stronger culture shock for them (see e.g., Crisp et al., 2009) as they more often reported experiencing university as a negative shock for them. They also reported feeling lonely and detached from their studies and experienced heavy workload. These negative emotional experiences are likely to reduce their academic performance, because they decrease motivation and may direct attention away from studying (e.g., Lewis et al. 2011). The largest difference between the groups was regarding their feeling of competence. None of the fast pace students expressed feelings of incompetence whereas over half of the slow-pace students reported these feelings. Vice versa, fast pace students expressed feelings of competence much more often than slow pace students. The feeling of competence as defined here is very close to the concept of self-efficacy which may be defined as an individual's perceptions of their own ability to perform successfully in a given situation (e.g., Bandura, 1982). In previous studies, self-efficacy beliefs have been found to influence the way students persist and succeed in their studies (e.g., Chemers, Hu & Garcia 2001) and the way they are able to regulate their studying (Asikainen, Mattson & Hailikari, in press). It is thus plausible that the sense of incompetence, together with the other negative emotions, constrained the slow-pace students' performance. Likewise, positive emotions could have enhanced the study progress by facilitating the use of more effective learning strategies and improving academic performance (e.g., Ruthig, Perry, Hladkyj, Hall, Pekrun & Chipperfield, 2007; Trigwell et al., 2012). However, the explanation of causes in both directions is plausible. Based on the present study, it is impossible to say whether (positive and negative) emotions influenced the study pace in the present study or if it was the other way around. Most likely the association between students' emotional experience and their study pace is bidirectional. The value of the present study results lies in raising awareness of the specific elements that are likely to be linked to each other and that form the learning experience for first-year students (cf. Trigwell et al., 2012). The study thereby contributes to the understanding of the relations between of students' emotions and their study pace - so far, a rather unexplored area.

4.1 Research Methodology

Most previous studies on emotions are questionnaire-based. One problem with this is that the questionnaires address certain emotions, while others may remain hidden. The method we selected (open, deep interviews) made it possible to identify a wide range of emotions related to studying and learning. In exploring emotions implicitly we tried to ensure that the ones the participants found hard to access and to express were included in the analysis, and that variations in the labelling of the same emotions were taken into account (Jostman et al., 2006; Quirin et al., 2009). Moreover, asking students directly about the academic emotions they experienced may have put pressure on them to recall certain kinds of emotions related to their studies. Allowing the participants to reflect freely on their study path enabled them to recall the most emotionally loaded experiences. Our results highlight the role of emotions during the first year at university: In most cases, the expression of emotions was not in response to specific questions the students were asked.

4.2 Limitations

Several limitations may limit the conclusions drawn in this paper. First, mirroring the discussion of its advantages above, the qualitative methodology may have overestimated the emotional content expressed in the interviews. With the focus on emotions, the analysers of the content may have included some false positives. In our view, this assumed hypersensitivity may nevertheless allow for a more valid picture of students' emotional lives than direct measures that may underestimate emotions. We are not aware of any perfectly reliable method of assessing emotions in addition to using a methodological triangulation approach.

Second, the conclusions may be distorted by the fact that the interviews were conducted at the beginning of the second study year. As Levine, Lench and Safer (2009) point out, there could be memory distortion, resulting in exaggeration of the intensity of the recalled emotions, which are also likely to be affected by current appraisals and beliefs. However, as we were interested in the students' holistic picture of their first study year, no other point in time would have made it possible to look at the "whole" of this time period. Future studies using, e.g., interview methods at several points of time, could qualify the present results.

Third, from a more theoretical point of view, it is unclear if the interview data assessed emotional frequency or emotional intensity and if we assessed emotional traits or rather states. Emotional intensity may not be systematically linked to frequency, while emotional traits may not be to states (e.g., Diener, Larsen, Levine & Emmons, 1985; Zelenski & Larsen 2000). We do not consider this issue as threatening for the conclusions drawn here, as the main goal was to describe students' emotional lives as they presented themselves. Nevertheless, we suggest researchers work to better distinguish these aspects also when using qualitative methods like interview data.

Fourth and finally, the sample size of the study was rather small and limited to certain subjects from a specific university. These circumstances apparently reduce the representativity of our conclusions. Despite the fact that representativity was not the main goal of the study and that the results as a whole confirm findings of studies that had used other methods, the smaller sample size allowed for a deep look into the content of the students' interviews.

4.3 Conclusion

Again, this study showed the importance of the regulation of students' negative emotions (and the enhancement of positive emotions) for their learning and their study progress. On an institutional level, the findings imply a need to create learning environments that promote positive emotions. Interest, enthusiasm and the enjoyment of learning have been associated with increased levels of academic motivation (e.g., Pekrun et al., 2002) and based on our results, also with higher study pace. These emotional aspects could be created in safe and yet challenging learning environments. On an individual teacher level, we suggest that university teachers encourage students and support their sense of competence, e.g., by providing them positive and constructive feedback. Teachers could not only react to (negative) emotions that are directly expressed by students, but the former could also interpret those from "everyday" conversations. As the results have shown, emotional aspects are a large part of students' communication, which is why we strongly recommend teachers listening to these aspects. Further, if it is true that negative emotions are indicative of study progress, then emotion regulation is an important issue for research and practice in the future. Some researchers have started this endeavour already: Järvenoja and Järvelä (2009), with a qualitative approach, found that students reported emotion regulation in the form of sharing emotions among each other; the second author, with a quantitative approach, found associations not only between deep learning approaches and positive emotions, but also between deep learning and emotion regulation strategies. We invite researchers to join us on this path to a better student learning.

References

Asikainen, H., Mattsson, M. & Hailikari, T. (in press). The interplay between academic emotions, psychological flexibility and self-regulation as predictors of academic achievement. *Journal for Further and Higher Education.*

Askham, P. (2008). Context and identity: Exploring adult learners' experiences of higher education. *Journal of Further and Higher Education, 32*, 85-97. http://dx.doi.org/10.1080/03098770701781481

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122-147. http://dx.doi.org/10.1037/0003-066X.37.2.122

Berridge, K.C., & Winkielman, P. (2003). What is an unconscious emotion? (The case for unconscious "liking"). *Cognition and Emotion, 17*(2), 181-211. http://dx.doi.org/10.1080/02699930302289

Boekaerts, M. (2007). Understanding students' affective processes in the classroom. In P.A. Schutz, & R. Pekrun (Eds.), *Emotion in education, Educational psychology series,* (pp. 37-56). San Diego, CA, US: Elsevier Academic Press. http://dx.doi.org/10.1016/b978-012372545-5/50004-6

Chemers, M.M., Hu, L., & Garcia, B.F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55-64. http://dx.doi.org/10.1037/0022-0663.93.1.55

Chen, P.Y., Dai, T., Spector, P.E., & Jex, S.M. (1997). Relation between negative affectivity and positive affectivity: Effects of judged desirability of scale items and respondents' social desirability. *Journal of Personality Assessment, 69*(1), 183-198. http://dx.doi.org/10.1207/s15327752jpa6901_10

Christie, H., Barron, P., & D'Annunzio-Green, N. (2013). Direct entrants in transition: becoming independent learners. *Studies in Higher Education, 38*(4), 623-637. http://dx.doi.org/10.1080/03075079.2011.588326

Crisp, G., Palmer, E., Turnbull, D., Nettelbeck, T., Ward, L., LeCouteur, A., Sarris, A., Strelan, P. & Schneider, L. (2009). First year student expectations: Results from a university-wide student survey. *Journal of University Teaching and Learning Practice, 6*(1), 11-26.

deMarrais, K. & Tisdale, K. (2002). What happens when researchers inquire into difficult emotions? Reflection on studying women's anger through qualitative interviews. *Educational Psychologist*, 37(2), 115-124. http://dx.doi.org/10.1207/S15326985EP3702_6

Diener, E., Larsen, R.J., Levine, S., & Emmons, R.A. (1985). Intensity and frequency: Dimensions underlying positive and negative affect. *Journal of Personality and Social Psychology, 48*(5), 1253-1265. http://dx.doi.org/10.1037/0022-3514.48.5.1253

Duff, A. (2004). Understanding academic performance and progression of first-year accounting and business economics graduates: The role of approaches to learning and prior academic achievement. *Accounting Education, 13*(4), 409-430. http://dx.doi.org/10.1080/0963928042000306800

Ekman, P. (1992). Facial expressions of emotions: New findings, new questions. *Psychological Science, 2*, 34−38. http://dx.doi.org/10.1111/j.1467-9280.1992.tb00253.x

Ellsworth, P.C., & Smith, C.A. (1988). Shades of joy: Patterns of appraisal differentiating pleasant emotions. *Cognition and Emotions, 2*, 301−331. http://dx.doi.org/10.1080/02699938808412702

Feldman Barrett, L., & Russell, J.A. (1998). Independence and bipolarity in the structure of current affect. *Journal of Personality and Social Psychology, 74*, 967-984. http://dx.doi.org/10.1037/0022-3514.74.4.967

Forgas, J.P. (2002). Feeling and doing: Affective influences on interpersonal behavior. *Psychological Inquiry, 13*, 1-28. http://dx.doi.org/10.1207/S15327965PLI1301_01

Haarala-Muhonen, A., Ruohoniemi, M. & Lindblom-Ylänne, S. (2011). Factors affecting the study pace of first-year law students – in search of study counselling tools. *Studies in Higher Education, 36*(8), 911-922. http://dx.doi.org/10.1080/03075079.2010.488722

Hailikari, T. & Parpala, A. (2014). What impedes or enhances my studying? The interrelation between approaches to learning, factors influencing study progress and earned credits. *Teaching in Higher Education, 19*(7), 812-824. http://dx.doi.org/10.1080/13562517.2014.934348

Häkkiö, H., Pyhältö, K., Pietarinen, J. & Soini, T. (in press). How does it feel to become a teacher? Emotions in teacher education. *Social Psychology of Education.*

Johnson, R.B, Onwuegbuzie, A.J., & Turner, L.A. (2007). Toward a definition of mixed methods research, *Journal of Mixed Methods Research, 1*(2), 112-133. http://dx.doi.org/10.1177/1558689806298224

Jostmann, N.B., Koole, S.L., van der Wulp, N., & Fockenberg, D.A. (2005). Subliminal affect regulation: The moderating role of action versus state orientation. *European Psychologist, 10*, 209-217. http://dx.doi.org/10.1027/1016-9040.10.3.209

Järvenoja, H., & Järvelä, S. (2009). Emotion control in collaborative learning situations – do students regulate emotions evoked from social challenges? *British Journal of Educational Psychology, 79*(3), 463-481. http://dx.doi.org/10.1348/000709909X402811

Ketonen, E., & Lonka, K. (2012). Do situational academic emotions predict academic emotions in a lecture course? *Social and Behavioural Sciences, 69*, 1901-1910. http://dx.doi.org/10.1016/j.sbspro.2012.12.144

Levine, L.J., Lench, H.C., & Safer, M.A. (2009). Functions of remembering and misremembering emotion. *Applied Cognitive Psychology, 23*, 1059-1075. http://dx.doi.org/10.1002/acp.1610

Lewis, A.D., Huebner, E.S., Malone, P.S. & Valois, R.F (2011). Life satisfaction and student engagement in adolescents. *Journal Youth Adolescence, 40*(3), 249-262. http://dx.doi.org/10.1007/s10964-010-9517-6

Lindblom-Ylänne, S., Saariaho, E., Inkinen, M., Haarala-Muhonen, A. (2015). Academic procrastinators, strategic delayers and something betwixt and between: An interview study. *Frontline Learning Research*, *3*(2), 47-62. http://dx.doi.org/10.14786/flr.v3i2.154

Lindblom-Ylänne, S., Haarala-Muhonen, A., Postareff, L. & Hailikari, T. (submitted). Exploration of individual study paths of successful first-year students: an interview study.

Linnenbrink, E.A. & Pintrich, P.R. (2002). Achievement goal theory and affect: An asymmetrical bi-directional model. *Educational Psychologist, 37,* 69-78. http://dx.doi.org/10.1207/S15326985EP3702_2

McMillan, W. (2014). 'They have different information about what is going on': Emotion in the transition to university. *Higher Education Research & Development, 33,* 1123-1135. http://dx.doi.org/10.1080/07294360.2014.911250

Op't Eynde, P., De Corte, E., & Verschaffel, L. (2001). What to learn from what we feel? The role of students' emotions in the mathematics classroom. In S. Jarvela & S. Volet (Eds.), *Motivation in learning contexts: Theoretical advances and methodological implications* (pp. 149-167). Oxford, UK: Pergamon.

Pekrun, R. (2005). Progress and open problems in educational emotion research. *Learning and* Instruction, 15(5), 497-506. http://dx.doi.org/10.1016/j.learninstruc.2005.07.014

Pekrun, R., Goetz, T., Frenzel, A.C, Barchfeld, P., & Perry, R. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology, 36*, 36-48. http://dx.doi.org/10.1016/j.cedpsych.2010.10.002

Pekrun, R., Goetz. T., Perry, R.P., Kramer, K., Hochstadt, M., & Molfenter, S. (2004). Beyond test anxiety: Development and validation of the Test Emotions Questionnaire (TEQ). *Anxiety, Stress and Coping,* 17, 287-316. http://dx.doi.org/10.1080/10615800412331303847

Pekrun, R., Goetz, T. & Titz, W., & Perry, R. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, *37*(2), 91-106. http://dx.doi.org/10.1207/S15326985EP3702_4

Pekrun, R., & Schutz, P.A. (2007). Where do we go from here? In P.A. Schutz & R. Pekrun (Eds.), *Implications and future directions for inquiry on emotions in education, Emotion in Education* (pp. 313-331). San Diego, CA: Academic Press.

Pekrun, R., & Stephens, E.J. (2010). Achievement emotions. A control-value approach. *Social and Personality Psychology Compass, 4,* 238-255. http://dx.doi.org/10.1111/j.1751-9004.2010.00259.x

Quirin, M., Kazen, M., & Kuhl, J. (2009). When nonsense sounds happy or helpless: The Implicit Positive and Negative Affect Test (IPANAT). *Journal of Personality and Social* Psychology, 97, 500-516. http://dx.doi.org/10.1037/a0016063

Rosenberg, E. L. (1998). Levels of analysis and the organization of affect. *Review of General* Psychology, 2, 247-270. http://dx.doi.org/10.1037/1089-2680.2.3.247

Russell, J.A., & Feldman Barrett, L. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, *76,* 805-819. http://dx.doi.org/10.1037/0022-3514.76.5.805

Ruthig, J., Perry, P., Hladkyj, S., Hall, N., Pekrun, P. & Chipperfield, G. (2007). Perceived control and emotions: interactive effects on performance in achievement settings. *Social Psychology of Educat*ion, *11*(2), 161-180. http://dx.doi.org/10.007/s11218-007-9040-0

Rytkönen, H., Parpala, A., Lindblom-Ylänne, S. & Postareff, L. (2012). Factors influencing bioscience students' academic achievement. *Instructional Science, 40*(2), 241-256. http://dx.doi.org/10.1007/s11251-011-9176-3

Schimmack, U, & Grob, A. (2000). Dimensional models of core affect: A quantitative comparison by means of structural equation modeling. *European Journal of Personality, 14*, 325-3445. http://dx.doi.org/10.1002/1099-0984(200007/08)14:4<325::AID-PER380>3.0.CO;2-I

Schwarz, N., & Clore, G.L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433–465). New York: Guilford.

Terracciano, A., McCrae, R.R., Hageman, D., & Costa, P.T. (2003). Individual differences variables, affective differentiation, and the structure of affect. *Journal of Personality, 71*, 669-703. http://dx.doi.org/10.1111/1467-6494.7105001

Trigwell, K., Ellis, R., & Han, F. (2012). Relations between students' approaches to learning, experienced emotions and outcomes of learning. *Studies in Higher Education*, 1-14. http://dx.doi.org/10.1080/03075079.2010.549220

Van den Berg, M.N., & Hoffman, W.H.A. (2005). Student success in university education: A multi-measurement study of the impact of student and faculty factors on study progress. *Higher Education, 50*, 413-446. http://dx.doi.org/10.1007/s10734-004-6361-1

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personal and Social Psychology*, *54*(6), 1063-1070. http://dx.doi.org/10.1037/0022-3514.54.6.1063

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology, 76*, 820-838. http://dx.doi.org/10.1037/0022-3514.76.5.820

Wittmann, S. (2011). Learning strategies and learning-related emotions among teacher trainees. *Teaching and Teacher Education, 27*(3), 524-532. http://dx.doi.org/10.1016/j.tate.2010.10.006

Yik, M.S.M., & Russell, J.A. (2001). Predicting the Big Two of affect from the Big Five of personality. *Journal of Research in Personality*, *35*, 247-277. http://dx.doi.org/10.1006/jrpe.2001.2322

Zeidner, M. (1998). *Test anxiety: The state of the art*. New York, NY: Plenum.

Zelenski, J.M. & Larsen, R.J. (2000). The distribution of basic emotions in everyday life: a state and trait perspective from experience sampling data. *Journal of Research in Personality, 34*, 178-197. http://dx.doi.org/10.1006/jrpe.1999.2275