Please cite the original version: Ekström, M., Raatikainen, E. and Isacsson, A. (2020), "Between despair and joy – emotions in learning". Journal of Applied Research in Higher Education, Vol. ahead-of-print No. ahead-of-print.

doi: 10.1108/JARHE-08-2019-0215

Available at: https://doi.org/10.1108/JARHE-08-2019-0215

emerald PUBLISHING

Journal of Applied Research in Higher Edu

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Journal:	*Journal of Applied Research in Higher Education*
Manuscript ID	JARHE-08-2019-0215.R2
Manuscript Type:	Development Paper
Keywords:	emotional competence, emotions and learning, narratives, HEI, emotional footprint

Between despair and joy – emotions in learning

The aim of the study was to research higher education students' meaningful emotions and develop a model for understanding and verbalising them. The model will foster awareness of the role that emotions play in learning. The qualitative data consist of 45 narratives gathered within three Finnish Universities of Applied Sciences in the Helsinki Metropolitan area. Emotions and their role in different encounters within a learning setting were analysed. The approach was narrative, and content analysis was used to analyse the data. In the narratives, students described meaningful emotional experiences connected to their studies and answered questions inspired by the critical incident technique. The results were discussed with teaching professionals to create an understanding for future learning settings of the role of emotions in them.

Keywords: Critical incident technique, Emotions in Learning, Narratives

Introduction

According to an annual study conducted in 2018 (PwC, 2019, p. 43), 'business leaders should continue to upskill their current and future workforce as well as cultivate soft skills such as creativity, problem solving and empathy in their corporate cultures'. Creativity and problem solving are common soft skills, but the pilot project emphasised empathy and emotion recognition as part of understanding the role that emotions play in the learning process. To increase students' future employability and ensure that they have adequate careers, Hora *et al.* (2018) suggest including *social*, *attitudinal* and *self-regulatory competencies* in the soft skills paradigm. Educators should be aware of and understand emotional reactions and their intensity to support adequate learning experiences. At the same time, everybody needs emotional competence (cf. Goleman, 1995) to improve their self-management skills and pursue continuous learning in a hectic and fragmented working life, where there is no time for emotional connection. Skills development and training in working life and interpersonal relations in the workplace are included in the United Nations Economic Commission for Europe's

Handbook on Measuring Quality of Employment (Eurostat, 2019). Thus, a thorough understanding of emotions can improve the quality of working life and create a better work–life balance.

According to Rivkin *et al.* (2018), affective commitment is important for creating flow experiences (cf. Csikszentmihalyi, 1997), which are important for workers' psychological well-being. To achieve flow experiences, one must understand one's emotions and how they are connected to learning. Emotions are dynamic and can change often during the day. Therefore, verbalising and grasping them simultaneously is complicated. The aim of this small-scale pilot project was to identify tools for understanding the connection between learning and emotions. The research focused on higher education students' meaningful emotions in connection with their studies and their capacity to handle and verbalise their emotions. Verbalising and emotion-handling skills are central to achieving successful and balanced work experiences. The results shall enable educational institutions to consider this connection and find an appropriate way of supporting students in handling emotions, thereby facilitating the development of their emotional competence in an ever-changing world.

Emotional experiences have been hidden in the learning process. Earlier academic education identified the lecturer/professor mainly as a distributor of knowledge. The pedagogical approach was mainly behaviouristic as the teaching proceeded in recognisable phases (see e.g. Murtonen *et al*., 2017) and interaction occurred but was scarce. The authors' experience of vocational education shows that this pedagogical approach is not relevant because students are younger and need more life coaching in addition to learning a new profession. In Universities of Applied Sciences (UAS), lecturers have developed increasingly into coaches who help students acquire new knowledge. As knowledge is socially constructed, interaction is key.

Additionally, if students lack the emotional skills to handle challenges, this can, in the worst cases, lead to unemployment and difficulties in life management and professional growth, thus increasing the risk of social exclusion. The rapidly changing world requires professionals who are aware of their emotions, accept them and know how to handle them. In other words, students should learn to build their self-efficacy to attain emotional balance.

Working life–centred pedagogy

The research was conducted at three UAS that have similar pedagogical approaches: collaborative pedagogy (Metropolia UAS), learning by developing (LbD; Laurea UAS) and learning as part of working life (Haaga-Helia UAS). All the Universities gave their permission to do the research study. The collaborative pedagogical approach (Metropolia UAS) emphasises teamwork and interaction skills, focusing on diverse learning environments. Work-based collaborative learning and teaching in teams are part of the learning culture. The objective is to support motivation and enthusiasm and foster students' responsibility for their own learning (Metropolia, 2019).

LbD is a unique, award-winning pedagogical model developed at Laurea UAS. Laurea UAS focuses on practical projects and collaboration with companies and employers. Thus, students learn through practical experience. A recent publication emphasises the following:

> The LbD action model has provided (a) mechanisms for individual and community knowledge creation to keep pace with the complex transitions in the operational environment. As well, in recent years, thousands of Laurea students have integrated this new knowledge into working life. (Ojasalo, 2019, p. 7)

At Haaga-Helia UAS, the pedagogical aim is to connect working life to the learning context by developing and applying new knowledge through experimentation and by striving for diversity and communality. The Haaga-Helia pedagogy advocates an investigative and development-oriented approach to learning that refers to practical, communal and regenerative practices. Thus, a development-oriented approach is integrated with student learning and co-creation knowledge development to support excellence and competency devlopment The pedagogical approach creates a favourable basis for integrating research, development and innovation activities.

The three UAS have forged a strategic alliance in the Metropolitan region of Helsinki. Every year, around 10,000 students (from 35,000 enrolled students) graduate from within this strategic alliance and enter working life. This is a large group of people who enter the volatile, uncertain, complex and ambiguous (VUCA) work environment. The present project focused on emotional aspects because mastering emotions and knowing how they lead to motivation as well as conflicts is important in the work environment and for work–life balance.

Learning environment from the professor's perspective

In the learning environment, students and teachers/lecturers/principal lecturers collaborate almost like colleagues, which means that more experienced or senior colleagues may also act as role models. Until recently, the primary focus was on the division of work and getting things done, while the emotions that are present during learning were overlooked. In educators' daily work, they meet, for example, inspired learners, learners in despair, learners enjoying learning, curious learners, learners hiding their feelings, learners who are confused or unhappy and learners who have problems in their private lives. In other words, educators encounter their students' emotional repertoire and must deal with it. They feel emotive dissonance (Hochschild 1983, p. 90)

– that is, something other than what they show in their everyday emotion work. Educators either evoke or suppress their feelings to meet the organisation's goals and students' needs (see e.g. Brenes-Dawsey, 2018).

Literature review

The present time can be described as VUCA. It is all about change, and this change can trigger emotional reactions (Bawany, 2016). Therefore, to perceive the required skills or competencies for meeting future challenges, a thorough understanding of the connection between learning and emotions is needed. Self-management, for example, is crucial for achieving goals and students can prepare to face difficulties if they have an understanding of emotions (e.g. Cranney *et al.*, 2016). As such, **emotional competence** (hereafter EQ) is an important basis for coping with VUCA and emotional intelligence (hereafter EI) in an educational setting should be underlined. As a starting point, the theoretical model of EI introduced by Salovey and Mayer (1990) was used to understand contemporary views on EI. For example, Fernández-Berrocal and Ramos Díaz (2008, p. 428) elaborate upon the difference between EI models that **connect emotions with cognitive processing** when discussing mental skills and those that combine **'mental skills with personality traits'**. Fernández-Berrocal and Ramos Díaz (2002) also anchor the discussion about emotion in a societal context: Emotions and social features were considered part of the private sphere during the 20th century. In the 21st century, a broader view on well-being, including positive emotions, such as happiness, has been presented in the public sphere (see e.g. Lipovetsky, 2006). Zins *et al.* (2004, p. vii) argue that 'social and emotional learning facilitates academic learning'.

An understanding of emotions in student learning is critical and even mandatory for creating successful learning experiences. Peixoto *et al.* (2015) show that students' emotional experiences should be considered multi-layered and complex, as they differ

considerably from one student to the next. Emotions play an important role in cognitive processes as such, but what remains unclear is what impact different emotions (negative and positive emotions) have in a learning context (Waller *et al*., 2017). Positive emotions seem to be a prerequisite for learning (see e.g. Isen and Reeve, 2005). Bolte and Goschke (2010) suggest that positive emotions in the learning process are correlated with flexibility and openness to information. However, there are contradictory views on the impact of negative emotions. According to Gasper (2003), a happy mood leads to new ways of addressing problems, whereas a sad mood causes learners to adhere to their earlier mental models. Yet negative emotions caused by confusion can also ameliorate learning (D'Mello *et al.*, 2014, p. 154):

> [O]nce an impasse is detected and confusion is experienced, the individual needs to engage in effortful cognitive activities in order to resolve their confusion. Confusion resolution requires the individual to stop, think, engage in careful deliberation, problem solve, and revise their existing mental models.

Furthermore, there is evidence of a connection between a positive mood and better self-regulation (Aspinwall, 1998), while negative emotions have been linked to rumination (Feldner *et al*., 2006). Webster and Hadwin (2015) underline the connection between emotions and self-evaluation and bring forward important information about achieving goals and regulating emotions in their research. According to Aspinwall and Brunhart (2000), it is obvious that people's optimistic beliefs may play a beneficial role in earlier stages of their coping process. The balance between 'positive and negative emotions can predict subjective well-being (Diener *et al.*, 1991). When considering emotions in working life, there is evidence that employees' positive attitude, satisfaction and motivation create a good foundation for occupational competencies (Gould *et al.*, 2008), thus preventing employees from having problems with over-working. According

to Zeijen *et al.* (2018), there is a strong relationship between workaholism and self-punishment. Altogether, some of their findings suggest that self-management strategies differ if one's behaviour tends more towards workaholism than true engagement with the work (Zeijen *et al.*, 2018, abstract).

Understanding one's emotions and their nature facilitates becoming a more emotionally competent person. EQ describes how a person recognises, understands, expresses and regulates their feelings and responds to the feelings of others. An emotionally competent person is responsible for their own feelings and the impact of those feelings on interaction and/or personal activity. EQ is closely related to EI or social emotional learning (SEL; Goleman, 1995). Researching emotions and EQ in a learning context is supported by Waters and Sroufe's (1983, p. 80) view on competence as 'an ability to generate and coordinate flexible, adaptive responses to demands and to generate and capitalize on opportunities in the environment (i.e., effectiveness)'.

Methodology and implementation of the study

As this research was not based on a prior theory, it relied upon a certain degree of open-endedness. The role of the data was to bring richness to theory and consequently identify a suitable construct (Graebner *et al.*, 2012, p. 278). The research questions were as follows: What are meaningful emotions? How do students talk about meaningful emotions? The authors were especially interested in what but also *how* students talk about their emotional experiences in a learning context (language use, recognising emotional aspects and the atmosphere of these accounts). The study focused both on gaining snapshots of emotional experiences while learning and analysing, using narrative content analysis, how students verbalise them. Students were asked to report meaningful snapshots of empowering and/or frustrating learning experiences within UAS. They were instructed to write about experiences where they felt gratitude, hatred,

admiration or disrespect. The authors deliberately used positive expressions first to highlight the positive descriptions. The intention was to use these data to create a model – a construct (cf. Kasanen *et al.*, 1993) – that would visualise the importance of emotions in a learning context. The emphasis was on the construction of knowledge and understanding by co-creating in social interaction, relying upon the participants' personal experiences and active learning attitudes (Richey *et al*., 2010).

Qualitative data were collected within different fields and at different levels of study (Master and Bachelor). The statistical population consisted of approximately 35,000 students enrolled in the three UAS. The survey generated 45 answers. As the data were qualitative, the richness of accounts was considered sufficient for answering the research questions.

The survey was shared through a link made visible in the students' intranet and it was open for three weeks in spring 2018. It consisted of five open-ended questions aimed at helping students share stories involving different emotional experiences in the learning context. The questions were as follows:

> Please share empowering and/or frustrating experiences during your university studies. Describe, for example, situations where you felt gratitude, admiration, hatred or disrespect. Describe in detail what happened. How did you feel in this situation? How did you or possibly others react in this situation? How did you analyse/sort out/solve the situation afterwards? Or did it remain unresolved?

The questions were partly inspired by the Critical Incident Technique (CIT) that was introduced by Flanagan (1954). The technique has been used in various contexts, such as in management research (Easterby-Smith *et al.*, 2012), service development (Bitner *et al.*, 1990), motivational studies and verbal reporting and psychology (Ericsson and Simon, 1980) as well as in education (Brenes-Dawsey, 2018). For further

information about the history of CIT, see Butterfield *et al.* (2005). Flanagan (1954, p. 327) states that CIT can be used for 'any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act'. In addition, rather than the number of respondents, it is the number of critical incidents generated that is important. In this study, the students could have been prompted to write about several critical incidents instead of concentrating on one. However, the answers generated sufficient data to create an understanding of the role that emotions play in the learning context at UAS. The process of verbalising emotions was also clearer. The five steps introduced by Flanagan (1954) and described by Butterfield *et al.* (2005) were followed. In the following, the connection with the research design is highlighted in parentheses:

- Ascertaining the general aims of the activity being studied (*emotions in a learning context*)
- Making plans and setting specifications (*creating a pre-understanding*)
- Collecting the data (*in detail in the paragraph about the research design*)
- Analysing the data (*narrative approach and data-driven analysis*)
- Interpreting the data and reporting the results

The narrative content analysis involved analysing both students' accounts individually (stories) and common denominators and similar themes, which were identified in all accounts (Lieblich *et al.*, 1998; Polkinghorne, 1995). In other words, this process combined a holistic approach with a more categorical approach (Lieblich *et al.*, 1998). Combining different perspectives is typical for narrative analysis (Coffey and Atkinson, 1996; Riessmann, 2008). Patterns were sought in a data-driven, inductive manner but also in a concept-driven, deductive manner (Schreier, 2012). The concepts in use were *EI* and *self-efficacy*. EI is defined as how individuals recognise, understand, express and regulate their emotions as well as recognise the emotions of others (Goleman, 1995). Furthermore, self-efficacy is defined as 'how well people motivate

themselves and persevere in the face of difficulties through the goals they set for themselves, their outcome expectations, and causal attributions for their successes and failures' (Bandura, 2012, p. 13). These two concepts supported the otherwise inductive, narrative reading of the accounts.

Results

The results are presented in two parts in line with the research questions. The first part describes the content of verbalising **meaningful** emotions and the second part describes 'how students **talk about** meaningful emotions'.

Almost 50 verbalised, meaningful emotions

The results show that most of the stories related to negative emotions and also described how the situation was resolved, because the questions prompted respondents to write about this. Further, the stories described how students progressed with their studies. Some students considered the emotional experience to be 'a lesson learned' for the future. Students also described having learned something about themselves and their reactions. However, there were also a few scenarios in the group where demanding negative emotional experiences had led to an interruption of studies or change of field of study. One student mentioned that participating in this study enabled him to describe for the first time the emotional state that he had encountered. The first impression of the results was that reflection upon relevant emotional experiences is important for two reasons – namely, for the progress of studies and for professional development and growth.

The authors were also interested in how students were able to verbalise their emotions and cognitively analyse them. This is called the appraisal component and it helps the individual track and differentiate their emotions (see more about the basic

assumptions of appraisal theory, e.g., in Ellsworth and Scherer, 2003). Defining emotions is complicated, according to Scherer (2005), and the authors aimed at facilitating a categorisation of emotional events in the narratives by using the Geneva Emotion Wheel (GEW), which was prototyped by Scherer (2005). 'The semantic space for emotions' (Scherer, 2005, p. 720) is described through the concepts of high and low power/control, obstructive and conducive, positive and negative, passive/calm and active/aroused. The main underlying categorising concepts are valence (feeling attraction or repulsion to an object or situation) and power/control. The verbalised emotions from the data were placed in the wheel to identify similarly described emotions. When no similar emotional adjective was found, the emotion was coloured in yellow, shown in Figure 1 below (e.g. appreciation, warm feelings, respectful, relevant). It was difficult to translate correctly and explain cultural differences in expressing emotions, but translating and translating back to the original language as well as analysing synonyms unveiled approximately similar adjectives. In the data, emotions were often described in relation to oneself or someone else, creating a social aspect of emotions. The GEW is often employed in research on emotions to define emotions felt during a certain moment (Scherer *et al.*, 2013) and the respondents describe the intensity of the emotion and define it by choosing from an existing list. GEW was used in this study to visualise the verbalised emotions and to analyse the emotional spectrum. Thirty negative emotions were described in contrast to 19 positive emotions. Of these 49 emotion descriptions, 20 were active arousal-related and 29 were passive calm-related.

Figure 1. Data in the Geneva Emotion Wheel (modification of Alternative dimensional structures for the semantic space of emotions, Scherer *et al.*, 2013, p. 284)

Seven ways of talking about meaningful emotions

By analysing the data narratively, seven ways of talking about meaningful emotional experiences in studies and learning by reading were found. The way of talking was evenly distributed, although there were slightly more stories of survival, learning and disillusionment. The decisive factors in classifying stories were how the story ended, how it was described and how the story aimed at capturing the reader's attention. Table 1 details the seven major themes identified within the data and provides brief descriptions of the characteristics of those themes:

Table 1. Results of narratives: seven ways of talking about meaningful emotions (Anonymised, 2018)

In the ***survival/learning stories***, attention was paid to coping with the emotional experience and learning about it for the future. However, learning experiences can teach emotional management when the learning styles differ. Positive emotions also taught students important things about themselves.

> 'I felt I was successful and it gave me faith in myself and motivation.' (12)
>
> 'I noticed that, at the same time, I admired my classmate, but I was also extremely envious of the fact that he knew and I did not. From this, I learned that instead of envying (or admiring) my classmates and cursing the course, I could have focused more on studying, and I did not give up because of "learned helplessness".' (2)
>
> 'I got over it quickly and it did not hurt me anymore.' (10)

In ***the story of the warrior***, the narrative was powerful. It was about overcoming

a situation. This also involved descriptions of injustice and fairness.

> 'The IT field of studies does not want students who are missing a Y chromosome.' (41)

There were relatively few ***appreciative stories***, but they could be found in some of the answers. They were typically about help received from teachers or students. In addition, time spent together was remembered with gratitude and it was meaningful for coping with stress.

> 'I was grateful to the teacher that she had time to help, although she had a really tight schedule.' (37)
>
> 'One of the teachers was compassionate, sorry for what had happened and said it was an unfair thing.' (40)
>
> 'Being proud is important, but it warmed my heart also to hear others being proud of me.' (5)
>
> 'I accepted admiration, though it made me confused. It also aroused feelings of gratitude and joy for my experiences in life.' (8)

The ***future-oriented story*** described determined actions to complete one's studies. The descriptions in this story differed from the survival/learning narratives because the student's control and ability were clearly highlighted. The student described challenging situations, but at the same time had clear plans for how to proceed in their studies.

> 'I know what I want, even if the teacher does not know/give a clear answer.' (9)

The story of underachievement reflected that the teacher did not behave as expected as a teaching professional and that this generated negative emotions. The teacher's interaction skills or expertise in the field were considered weak, causing student distrust. For example, the uneven or opaque assessment caused confusion.

> 'The teacher booked an appointment with the public health nurse and accidentally mentioned this to the whole student group.' (27)

> 'One active student in our programme decided to intervene and put a public message, where he/she raised some issues. The tone was kind and questioning, so I do not understand why the teacher removed the student from the course.' (39)

The story of the frustrated depicted strong negative feelings, referred to similar past school experiences and did not present ways to resolve the situation. The impression was that the student remained in the chains of that strong emotional memory.

> 'I am uncertain if I do the right learning "things" and in the right way, I have the same feeling as I had several years ago in elementary school.'

> 'One dictates what is done and does not value the work or opinions of others. I could almost not stand it. I am furious and there is no point in being considerate.' (24)

The story of disappointment was similar to the story of the degraded/frustrated, but the disappointments were more closely related to current studies and did not convey memories of previous studies. The disappointments were related to the students themselves, other people or challenges with computers and training systems.

> 'Reservation system rollover: I reacted very strongly to the situation, and I was not able to control my emotions.' (27)

> 'I am bad, lousy, I cannot, I don't understand, I am anxious, stressed out, ashamed. Moreover, at times, I have the feeling that I have done something bad.' (29)

Educators' perspectives on implications for the learning process

To ensure that the results from this pilot study would be integrated into educational activities, the authors arranged a workshop called 'All learning has an emotional base', using Plato's adage. The aim was to understand the role that emotions play in learning. The authors also wanted to create a common understanding of how to

support and verbalise emotional expression in their daily work with students. The normalisation process theory includes different steps of integrating a practice – namely, 'coherence, cognitive participation, collective action and reflexive monitoring' (May and Finch, 2009, p. 543). The workshop concentrated on cognitive participation that would engage actors of importance to discuss and make sense of the results.

The workshop included a short presentation of the preliminary results and a discussion around the theme. The teachers involved in the workshop had more than 14 years of teaching experience on average (23, 22, 13, 9 and 7 years, respectively). They all had a diploma in pedagogy on top of the subject matter, which is mandatory in UAS. Lonka (2018, p. 26) states that 'The Finnish Education system relies entirely on highly educated teachers' and this is given even more emphasis in UAS, where pedagogical skills are crucial.

The workshop discussions were summarised using Janus Cone (Venturesight, 2020), which is a method for **co-development and anticipation of the future**. Using the Janus Cone tool successfully necessitates information about different changes in the context at hand. The authors' view was based on experiences of different connections and contacts with students during their careers as well as on facts about steps in the development of the Finnish education system. The workshop started with a presentation of the seven narratives (see Table 1). Quotations from the data were also presented. In the introductory presentation, future scenarios were shown, such as a computerised 'learning companion' that could react to all the students' emotional states (Kort *et al.*, 2001, pp. 45-46). In the discussions, the role of the teacher both on campus and in an online setting was in focus, although the online context was emphasised. Emotional encounters differ when teachers meet students both synchronously and asynchronously. The future of learning is characterised by the development of artificial intelligence;

thus, responding to emotional experiences will differ. Learning about the different emotional repertoires in the narratives resulted in a vivid discussion about different pedagogical solutions where favourable emotions could be underpinned and unfavourable ones avoided. In summary, the workshop resulted in a common view on the role of emotions in different educational settings. Emotional experiences as well as the process of verbalising them should be included in the feedback process and evaluation of courses. Moreover, special attention should be given to the context and space where the learning occurs. Educators should also have a view on how emotions are not only born in synchronous settings but also before and after the lectures.

Discussion and further recommendations

The research concentrated mainly on students' verbalised emotions, but emotions are born in interaction with other students, systems, contexts, teachers and the organisational culture of universities. No man is an island; therefore, emotions cannot be taken out of their context. In the stories, stronger self-efficacy was visible, for example, in the warrior/learning and future-oriented stories. The stories showed an understanding of emotions and an ability to bounce back (cf. psychological resilience, 'the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress and not being stuck in negative emotions', American Psychological Association, 2011). In the appreciative story, positive emotions were described and they showed an ability to relate to success, which is not always evident in the Finnish culture. Perhaps appreciation is showing a higher level of EQ – that is, a way of relating to others in a positive way. The stories of frustration and disappointment showed that there is more work to do. Educators must create possibilities for students to express negative emotions directly when something happens. These stories revealed the importance of knowing and understanding why negative incidents occur and how they

affect learning. For students to show curiosity for learning something new and abandon earlier mental models, they must verbalise frustration and disappointment early on. Similar results to those of this study can be found in research focusing on students' emotional well-being (Tharani *et al.*, 2017). In addition, Kingston (2008) shows that emotions controlled students when learning, and Stelnicki *et al.* (2015) report about different themes that led to success or were barriers to success – themes including emotions such as anxiety.

Based upon all the verbalised emotions and interpretations and their combinations (seven ways of talking about emotions), a practice or model for practical steps was developed and we decided to call it 'Emotional Footprint', using the concept as introduced by Levine (2015). EQ is included as an important concept in this model and EQ is developed by analysing different events that can be verbalised as emotional narratives (cf. our research method and narratives). The model could also include the stories as a source for inspiration but without being too fixed upon the content, as stories can differ. It is about individuals understanding themselves, understanding others and using emotions as energisers. Understanding emotions means being able to verbalise them in any social context.

It is also important to support emotional expression and improve EQ during life-long learning. An uncertain future, described as VUCA, requires more people who have a strong understanding of emotions and how these enhance and prohibit. With this model for expressing, verbalising and analysing emotions already in use during students' studies, facilitates the use in the professional life. There is also a need to emphasise that universities can learn to turn negative emotions into constructive energy as well as boost authentic, positive emotions, or in another words create positive learning experiences. Further research is needed to create and validate tools for

identifying emotions in feedback forms as well as in tutoring discussions with students. We are nowadays more often educating online, which also means that we need ways of including affective feedback in these settings. A combination of multimodal analysing tools could be used as presented by for example Alagarai Sampath, Indurkhya, Lee, and Bae (2015). New tools are definitely needed but above all educators must be aware of the emotional spectrum of people to create learning experiences of high quality in different learning contexts. Their emotional footprint as professionals of learning is central and definitely part of their societal responsibility. Not only emotional competence is the answer as we could expand the perspective to include a social and cultural dimension to create more responsive teaching (cf. Gallagher, Collopy, Nenonene and Kelly, 2020). The social-emotional framework within a learning context is frequently used and as Schonert-Reichl, 2017 claims, the social-emotional competence of educators strongly influence students. With the research design and through the results of our study, we offer an insight in the role of emotions in learning and how they can be captured and addressed. Continuous improvement of the way we capture students' emotions is crucial if we want to prepare our students for a world that is more unpredictable than before.

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Tables and Figures

Between despair and joy – emotions in learning

Figure 1

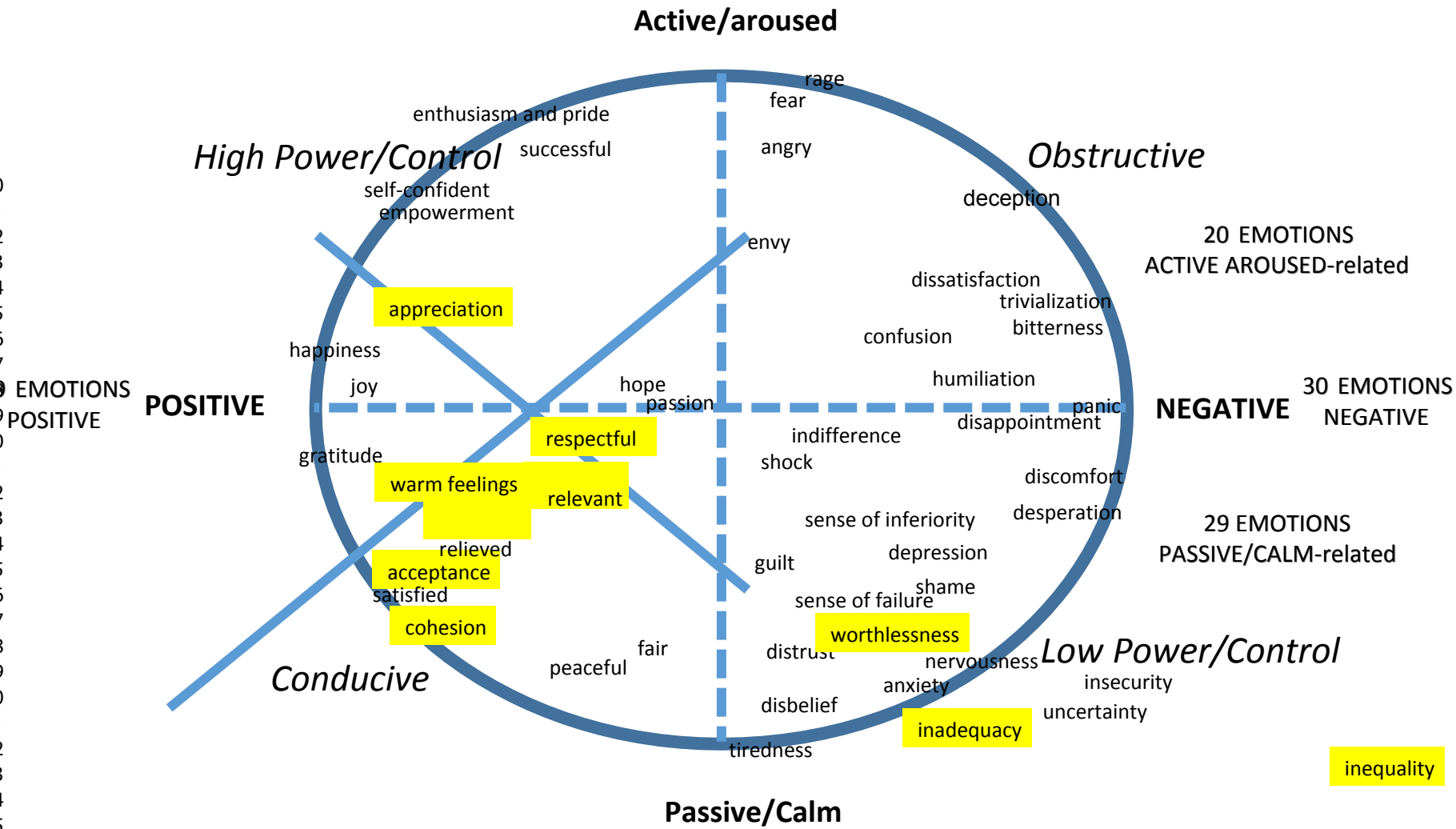
Active/aroused
rage
fear
enthusiasm and pride
successful
angry
High Power/Control
Obstructive
self-confident
empowerment
deception
envy
20 EMOTIONS
ACTIVE AROUSED-related
dissatisfaction
trivialization
appreciation
bitterness
confusion
happiness
humiliation
19 EMOTIONS
POSITIVE
POSITIVE
joy
hope
passion
panic
NEGATIVE
30 EMOTIONS
NEGATIVE
disappointment
respectful
indifference
gratitude
shock
warm feelings
discomfort
relevant
desperation
sense of inferiority
29 EMOTIONS
PASSIVE/CALM-related
relieved
depression
guilt
acceptance
shame
satisfied
sense of failure
cohesion
worthlessness
fair
distrust
nervousness
Low Power/Control
peaceful
Conducive
anxiety
insecurity
disbelief
uncertainty
inadequacy
tiredness
inequality
Passive/Calm

Table 1

The Story	Description of Story
1. The survival / learning story	Attention was paid to coping with experience and learning about it for the future.
2. The warrior story	A story of fighting against challenges as a winner. This also involved descriptions of injustice and fairness.
3. The appreciative story	Were typically about help that was received from teachers or students.
4. The future-oriented story	The student describes challenging situations, but at the same time he has clear plans how to proceed in his studies/a goal for future.
5. The story of underachievement	Reflects upon how the teacher does not behave as expected from a teaching professional and how this generates negative emotions. The teacher's interaction skills or expertise in the field is consideredweak, causing student distrust.
6. The story of the frustrated	Depicts strong negative feelings, refers to similar past school experiences, and does not present ways to resolve the situation.
7. The story of disappointment	Disappointments are more related to current studies, and (related to students themselves, other people, or computer challenges and training systems.)