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From disciplinary enthusiasm to soulless tasks: norms behind computing educators' emotion display

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ABSTRACT

Computing educators' emotion display is regulated by various norms and conventions. These (unwritten) rules affect which emotions educators feel comfortable expressing to different extents when students can perceive such displays. We draw on emotions and norms literature to investigate higher education computing educators' perceptions of what kinds of norms they have as criteria when considering which emotions they are (not) comfortable showing when teaching. Based on the qualitative content analysis of 22 interviews with computing educators from seven countries, we present various – sometimes connected or conflicting – norms that influence emotion display. These norms comprise moral, national, societal, professional, and affiliation norms that are salient in different ways for different educators. The findings contribute to a more nuanced understanding of various combinations of nested, context-dependent, and partly conflicting norms that guide educators' emotion display, an understanding of educators' work that goes beyond cognitive aspects.

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Emotions; norms; computing educator; teacher; faculty

1. Introduction

Computing educators[1] are caught between two very different cultures. On the one hand, they are part of the computing culture. This is a discipline that includes software engineering and computer engineering, along with computer science, cybersecurity, data science, information systems, and information technology (ACM Association for Computing Machinery n.d.). It is rational and technically oriented (Malazita and Resetar 2019; Ottemo, Berge, and Silfver 2020). On the other hand, computing educators belong to a teaching culture that involves interactions with students in various pedagogical situations. These contexts raise emotions in both the educators and their students (Maier et al. 2023; Stockinger et al. 2025).

Recent reviews in engineering education (Lönngren et al. 2024) and computing education (Coto et al. 2022) have shown that emotions are indeed part of these disciplines. Research on students' emotions has been conducted in a variety of settings. For instance, there is a body of research on the emotions that novice programmers experience in their learning (Coto et al. 2022; Kinnunen

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and Simon 2010, 2012; Lishinski and Rosenberg 2021), with frustration and confusion as the most studied emotions. However, higher education educators' emotions are underresearched, and there is a need for theory-based approaches (Lönngren et al. 2024).

While teaching staff may experience a range of emotions, they may not always feel comfortable showing their emotions. Educators may consider to different extents a variety of criteria that affect their emotion display. More directly provided to them, there are written or very clearly specified rules for educators, such as documents describing staff policies. For instance, policies on the use of generative artificial intelligence tools by students or staff may give rise to various emotions, and the text may indicate what is expected from the educator, e.g. mandatory use and showing acceptance or even enthusiasm. Less tangible criteria for emotion display are present as norms, i.e. unwritten rules of what different communities consider desirable, expected, or common. In the same example, the educator may consider their own values, guided by moral rules. This could take the form of a concern for the impact of these tools on the planet, in conflict with a care for the environment. Should one then follow the policy and the reaction that one perceives as expected and hide their concern? Or should one display the actual emotions being experienced, risking a negative reaction from others?

Computing educators may thus identify certain expectations on emotions experienced and expressed in their work environment; they may be in situations as employees in which their genuinely felt emotions are not in line with the emotions their work role expects them (not) to display. Dealing with this mismatch of experience and expectations is *emotional labour* (Berry and Cassidy 2013; Hochschild 1979; Tsang 2014). Emotionally laden situations in computing teaching may then require hiding one's own emotions or faking expected emotion displays that the community and the employer consider appropriate. According to the literature on emotional labour, people tend to either genuinely express the emotion they are experiencing or suppress the emotional response by hiding or faking emotional expressions (Aldrup, Carstensen, and Klusmann 2024). Previous studies have shown that university educators perform high levels of emotional labour, even higher levels than people in occupations traditionally related to emotional labour, such as nursing (Berry and Cassidy 2013). This is relevant to study in times when there is a concern for the well-being of educators in engineering higher education (e.g. Dreer 2024; Sánchez-Peña and Gesun 2022; Sánchez-Peña et al. 2019).

While computing educators' emotional labour is the focus of our broader project, in this paper we take the first essential step for understanding this phenomenon: identifying what kinds of norms are considered in teaching staff's emotion display when teaching, as this would influence when and how emotional labour emerges.

There is limited research on how computing educators bring emotions to their practice in a way that students may notice and reflect on them, and how these emotions might (or might not) be aligned with norms in computing, teaching, and the wider context of the educator. Thus, in this multinational interview study, we look at the emotions that higher education computing educators experience when teaching and explore which norms dictate whether educators express emotions in teaching situations. This is framed as the following research question (RQ): *What norms do computing educators use as criteria for their emotion display when teaching?*

Our goal is to contribute to the understanding of norms around teaching in computing, and how these may affect educators differently, e.g. depending on their teaching experience, social identities, etc. By studying how educators interpret professional, institutional, and other norms around emotional display, we hope to add to discussions on the reduction of their emotional labour. Explicitly identifying these norms also contributes to social justice practices, by connecting biases and discrimination to the emotional labour of the educator.

2. Background

To situate our study within the existing literature, we begin by presenting research on educators and their emotions. This is followed by research on norms: definitions and applicability, first to the teaching context generally and second to the case of computing and engineering education. While

emotions and norms have been studied broadly, research on norms related to computing educators' emotion display is lacking, which this paper aims to address.

2.1. Educators' emotions

Teaching evokes a large variety of emotions in educators from positive, pleasant emotions to negative ones. By emotions (Pekrun and Linnenbrink-Garcia 2012) we refer to complex processes that activate and constitute of several factors such as affect, cognition, physiological arousal, and behaviour. Further, emotions may be either positive (pleasant emotions), or negative (unpleasant emotions). In addition, as appraisal theory suggests that emotions are evoked from the cognitive evaluation of the situation, it means that the same situation may evoke different emotions in different people (Ellsworth and Scherer 2003).

Educators' emotions have been widely studied using a variety of theoretical approaches. The recent systematic review by Aldrup, Carstensen, and Klusmann (2024) summarises four main lines of research on emotions: studies that focus on coping, emotion regulation, emotional labour, and emotional intelligence. Despite the various foci of the research lines, from coping with stress to regulating and managing emotions, the common tenet of these four lines of research is that people can modify their emotional experiences and expressions. In this paper, we build mainly on the tradition of sociological emotional labour research as discussed in Aldrup, Carstensen, and Klusmann (2024) and Lönngren et al. (2024) that is interested in how people regulate their emotions and emotion display in the workplace. In this study, we are particularly interested in educators' expressive regulation of emotions. Further, we focus on what the educators' perceptions and experiences are of what kinds of rules, norms, or conventions guide their emotion display.

Some of the more often reported teaching-related emotions (Isenbarger and Zembylas 2006; Postareff and Lindblom-Ylänne 2011; Sutton and Wheatley 2003) are caring for students as well as joy and satisfaction when students succeed. Enjoyment and feeling excitement or enthusiasm were also experienced by educators. Among negative emotions, anger and frustration, as well as anxiety, guilt, and sadness, were present in teaching-related tasks. However, there are certain rules and conventions that regulate what emotions teachers can or should show. Some emotion display rules are connected to professional roles. Teachers tend to hide their negative emotions, such as anger and frustration, because they view it as a part of their professional role (Sutton 2004).

Other rules and conventions for emotion display are deeply embedded in our culture. For instance, there are shared understandings within Western culture: 'when we say someone is "emotional," we usually mean irrational. Emotions, although sometimes thought of as a guide to our true selves, are often thought of as out of control, destructive, primitive, and childish, rather than thoughtful, civilised, and adult.' Sutton and Wheatley (2003, 328). Teachers' emotion display rules have also been found to be partly related to the cultural context and to the teacher-student relationship (Hagenauer, Gläser-Zikuda, and Volet 2016). Prior research (Hagenauer, Gläser-Zikuda, and Volet 2016) has suggested differences in emotional expression norms among educators across countries, with one study finding German teachers reported more comfort expressing certain negative emotions compared to their Australian counterparts. Teachers from Australia, on the other hand, were found to be more comfortable showing more intense expressions of positive emotions compared to teachers from Germany. There are also notions on the importance of knowing the cultural context when teaching. Teachers from different cultural backgrounds may feel insecure when teaching in unfamiliar environments (Hagenauer, Gläser-Zikuda, and Volet 2016). This notion is particularly interesting when considering the international nature of higher education. It is not uncommon to have educators from a range of cultural backgrounds in universities.

The degree to which educators decide to display emotions when teaching has consequences. When teachers display naturally felt emotions while teaching, it has a positive effect on teaching efficacy (Han et al. 2021). However, sometimes expressing genuinely felt emotions is not regarded

as appropriate, so another option is that the teacher hides or fakes emotions when teaching (Constanti and Gibbs 2004).

Regardless of convincing research evidence that emotions are an integral aspect of teachers' professional work, it seems that the university teachers themselves do not recognise emotions as characteristics of a good university teacher (Pekkarinen, Hirsto, and Nevgi 2020). However, teachers' emotional intelligence (for instance, being aware of one's own and others' feelings, managing one's own feelings, using feelings to achieve one's own goals, and handling emotions in social interaction) (Mortiboys 2013) is recognised as a part of teaching competence (Joshith 2012). The concept of emotional intelligence has been criticised as an approach that expects conformity to norms and reproduces existing power structures (Wint 2024). Thus, there is no consensus on how educators should manage their emotions when teaching, when and where needed.

2.2. Norms

Norm is a broad term with many definitions. Among others, these refer to values shared by a community, rules we are expected to follow regardless of whether we agree with them, standards or patterns that serve as limits to what one should do in a particular societal context (Gibbs 1965).

From a sociological perspective, Gibbs (Gibbs 1965) proposes a classification of norms based on whether they are defined as shared beliefs on what should be done, what will be done, and reactions to behaviour. Who agrees with the belief, and to what extent, may differ.

Bicchieri's work on social norms (Bicchieri 2014) develops these concepts further. A social norm 'refers to a behaviour that is collectively approved or disapproved in a group or population and is enforced by sanctions.' (Bicchieri 2014, 209) There are descriptive norms (what is common) and normative norms (what should be done). These norms may be followed because we fear a negative outcome, a sanction, or because we expect a reward from it. More importantly, we conform to these norms because we assume that our group would share both the belief and the behaviour. This group that we consider when assessing whether to conform to a norm is called a reference network (Bicchieri 2023). In the context of computing teaching, the main reference networks are teaching staff and students, i.e. educators may perceive expectations from their colleagues and their students.

Other norms in our communities include moral norms, cultural norms, and those connected to social identities in complex interactions. For instance, moral norms from care ethics are affected by gendered norms in some cultures, and care is not valued (Harcourt 2023; Noddings 1986).

In this study, we are interested in norms of any kind that affect emotion display. Thus, we generally refer to non-emotion norms, emotion norms, and their relationship when identified.

2.2.1. Norms in teaching

Ways of participating (doing, thinking, feeling) in a community are socially negotiated (Lave 1991). The role of the educator partly involves communicating norms, whether explicitly or implicitly: one of the dimensions of purpose of education, as described by Biesta (2020), is socialisation, which concerns learning the norms and ways of participating in a community. Another of these purposes, qualification, refers to knowledge and skills needed, which connects to how educators can feel expected to know the subject and transmit enthusiasm for it in a way that students can emulate (Grande, Berglund, and Daniels 2017).

An educator's main ethical responsibility is caring for students and their learning. Further, Isenbarger and Zembylas (2006) identifies three types of care that are related to educators' work: pedagogical care, moral care (values that one communicates in teaching), and cultural care (the norms of the culture). While other responsibilities are also important, here we highlight care because it is one of the more studied topics in emotions in engineering education research (Lönngren et al. 2024) and it is associated with other norms, e.g. it is gendered (Noddings 1986).

Care ethics, a feminist approach focussed on relationships (Gilligan 1982), has been used in education, where the educator is the one doing the caring (the carer) and the student (the cared-for) receives said care (Mariskind 2014; Tronto 1993). This is done in communication and reflection, with the educator reflecting on aspects such as what the student needs and whether this harms others, including the educator themselves (Noddings 1995). Educators who conform to the norms in care ethics aim to approach their teaching by identifying students' needs, taking responsibility for and addressing them as much as possible, and checking for confirmation that the needs have been met (Mariskind 2014). Student needs are not only those assumed by the educator, but also those expressed by the students (Noddings 2012). Addressing these needs may imply advocating for systemic change (Mariskind 2014). Thus, caring in higher education is a radical act (Baker and Burke 2023c). This going against what is established makes the caring educator a good candidate to become a 'tempered radical': someone with personal values and ideologies that clash with those of their institution, an educator who 'remains engaged in the dual project of working within the organisation and working to change the organisation' (Meyerson and Scully 1995, 586), creating change from the inside (Meyerson and Scully 1995).

However, care is unevenly distributed and underperformed at a systemic level. Not all educators may be expected to care. While everyone cares in our societies, research has shown that care work is often gendered and disproportionately associated with and performed by women (Noddings 1986), people of colour, and other marginalised groups (Harcourt 2023). In higher education, universities undercare (Baker and Burke 2023a).

2.2.2. Norms in engineering and computing education

Norms and values in engineering have been studied for decades. Much of that work has been done in gender or feminist research. Norms and values in engineering and engineering education imply that certain ways of doing or being in engineering and certain ways of knowing are favoured over others. Research has repeatedly problematised the reductionist framing in engineering education, as well as the orientation towards mathematics and technology (Ottemo, Berge, and Silfver 2020). Referring also to others, Malazita and Resetar (Malazita and Resetar 2019) argue that computing education produces a split in students' technical and social identities, which especially affects marginalised groups.

Much of earlier work suggests that norms and values in computing are 'co-produced' or aligned with social norms of masculinity (e.g. Faulkner 2001; Ottemo, Berge, and Silfver 2020; Salminen-Karlsson 2011; Wajcman 1991), hence privileging male students over others. For instance, it is often boys who are socialised as being interested in mathematics and technology, while girls are socialised as helping other people and caring about sustainability (Faulkner 2001; Margolis and Fisher 2002; Salminen-Karlsson 2011). Reviewing previous research, Ottemo, Berge, and Silfver (2020) argues that another explanation for how technology education is masculine is that it is mostly about transferring knowledge that is certain and not questionable. Ottemo finds that formal education in the context of technology fails to engage students subjectively, privileging students who come with a passion for computers, which then may contribute to rather 'nerdy' ways of relating to computing, having a passion for technology for the sake of technology. Peters's longitudinal interview study following students through three years of their university studies in computing (Peters 2017, 2018) suggests that students give up broader interests in society, and align their ways of making sense of computing to become rather technical. The students summarise this as 'back-end programming', solving the really difficult technical problems leading to solutions that are hardly visible and noticeable to anyone.

A large body of technology and education literature suggests that emotions are marginalised or not legitimate for showing in computing education. For instance, as mentioned above, computing education is found to be 'co-produced' with hegemonic masculinity, with masculinity being associated with rationality, while femininity is associated with being emotional. On the other hand, emotions are seen to be present, however leaning toward a desire for technical problem-solving

(Peters 2017), engagement with machines ('machine fetishism') or techno-optimism (Knutsson 2018). Geographical and institutional cultures also play important roles in the type of emotions that are legitimised within a field and, consequently, within academic and professional practices, e.g. Oplatka and Vertaimer (2023); Tsai (2024); Yin and Chi-Kin Lee (2012).

This research implies that certain emotions or emotion expressions, e.g. objects to feel emotions about, are acceptable while others are not. Showing a passion for technology, performing in rather stereotypical ways of a computer nerd or geek, helps to be recognised as competent.

Within computing education, a norm on innate talent is known as the 'geek gene': 'There are two types of CS [computer science] students, based on innate ability: those who can learn and those who can't.' McCartney et al. (2017, 405). Some educators believe in this while others do not, and they worry about how students who are considered to lack this 'gene' may include students in already marginalised groups (McCartney et al. 2017). In other words, there are computing educators whose teaching approach includes the conviction that only a selected group of students can be taught computing successfully.

To conclude, computing educators' emotion display is guided by several norms, some of which conflict with each other. On the one hand, computing educators are expected to conform to a masculine culture of technology (Ottemo, Berge, and Silfver 2020) that excludes emotions except for interest and excitement about technology itself. On the other hand, as an educator, one is expected to care for students' learning and well-being. For instance, computing students expect their teachers to get them ready for industry in this rapidly evolving field (Ylijoki 2000). As an educator, one is also not supposed to show (strong) negative emotions but convey enthusiasm for the topic, regardless of the educator's genuine emotions when teaching (Sutton 2004). Understanding the complexity of these norms can thus bring light to how computing educators experience their teaching.

3. Research approach

3.1. Participants

We used semi-structured interviews to collect data on which emotions teaching staff experienced when teaching and the degree to which they were comfortable expressing felt emotions. We constructed the interview plan by utilising previous research on educators' emotional display and our own previous studies on role modelling (Grande et al. 2022) (see the interview plan in Appendix). We did one pilot interview and adjusted some wordings and questions in the interview plan. The pilot interview was not included in our data. In addition, when we conducted the first actual interviews, the interviewers shared their experiences with the rest of the team to convey which questions seemed to be more challenging to answer than others. This was valuable information for the rest of the researchers who did their interviews later, as it helped to prepare for possible needs for more detailed follow-up questions.

We recruited interviewees through the survey we used to collect data for our previous study (Grande et al. 2022) in which there was an open question asking whether the respondent would be interested in being interviewed. We also used our contact lists to recruit some additional interviewees. When we invited educators to be interviewed, our aim was to represent a diverse set of teaching experiences in terms of, e.g. computing area, length of teaching experience, the roles and teaching responsibilities, geographical and cultural background, gender identity, ethnicity, immigrant identity, and neurodiversity.

To protect the participants' anonymity, here we broadly represent the identities and belonging to diverse groups as described and understood by the participants themselves, e.g. the umbrella term queer instead of specific identities within it.

All but one author of this paper conducted at least two interviews following the interview plan. We conducted a total of 22 interviews, lasting from 15 minutes to 102 minutes. Most interviews were conducted online (Zoom), except for the interviews in Sweden and in the US, which were in person in

a place of choice by the participant, e.g. their office, the interviewers' office, a cafá. Participants were affiliated with institutions in Botswana, Finland, New Zealand, Romania, Sweden, the UK, and the US. The interviews were conducted in the language of choice of the participant when the interviewer was fluent in it. Otherwise, they were conducted in English, with the participant being encouraged to use words in their native language if preferred. For example, a Swedish participant interviewed in English referred to *pinigt* as an emotion they could not translate into English but attempted as *cringe*. On the other hand, in an interview in Romanian, English translations were the limitation. In Romanian, the term *mâhnit* relates to *trist*, with some nuance difference. The English translation of *sad* corresponds more closely to *trist*, and we could not find a proper translation for *mâhnit*.

After the pilot interview, we updated the interview plan to provide more scaffolding for the interviewees, as identifying and discussing emotions is not a trivial task. Interviewers were aware of this challenge, especially when considering cultural interpretations, and thus provided clarifications or added information when needed during the interviews. For instance, when asking about social identities in Sweden, confirmation was provided that these went beyond the ones explicitly protected by the Swedish Discrimination Act. Language was also discussed, e.g. we clarified our interest in emotions that students could perceive in any way, and thus there was no significant difference between showing, displaying or expressing (as some participants wondered if the study was confined to (non)verbal communication). All interviews were transcribed, anonymized, and, if needed, translated into English.

The interviewees included people who identified themselves as cisgender, transgender[2], woman, man, queer, immigrant, local citizen, working-class background, White, Black, Asian, Latine, ethnic minority, religious minority, autistic, with ADHD, chronically ill, and disabled. Several participants shared their experiences of dealing with (mental) health challenges during their teaching.

Interviewees' teaching experience varied in length and depth. This was represented in one way by the current teaching positions and duties of the participants (teaching assistants, lecturers, course leaders, program coordinators) and their paid positions (PhD students, tenure-track or tenured positions of different levels up to full professors). The participants' teaching experience varied from two to 54 years. Most of the interviewees had taught several topics at different levels (bachelor's, master's, PhD level courses), including project courses, during their teaching career in higher education. In addition, some educators also had teaching experience from other levels of education such as upper secondary school and post-secondary non-tertiary education (according to the International Standard Classification of Education (ISCED)). Participants had taught in person and online (including emergency remote teaching), for student cohorts of varied sizes, from one-on-one supervision to small groups of 15, and large classes up to 600 students. Their responsibilities included assisting in labs, designing the course or part of the assessment, giving lectures, leading seminars and discussions, having progress meetings with students, supervising thesis work, and grading assignments, projects, and exams. Others had responsibilities at a higher coordination level, such as program coordinator, which gave them a wider overview of how the teaching in their work environment worked.

3.2. Analysis

Our data preparation and qualitative inductive content analysis (Mayring 2014; Vaismoradi, Turunen, and Bondas 2013) proceeded as follows:

(1) All interviews were transcribed verbatim in the language of the interview. Each transcript was anonymized by the interviewer who conducted the interview. Transcriptions were translated into English if needed.[3]
(2) The first round of analysis: all authors carefully read through the interviews and identified all the emotions mentioned by the educators, and notions about what affected the participant's decision to (not) display the emotion. The results of the first round of analysis were assembled

into a summary table (not included in this paper) containing columns for emotion and what affected the educator's decision to (not) display the emotion.

(3) Second round of analysis: the first two authors read the summary table carefully several times, grouped similar norms together and named the groups. A few iterations in grouping and naming the groups were needed until the researchers agreed on the suitable abstraction level and the group names. The researchers read through the summary table looking for norms that interviewees had mentioned that affect their emotion display. Next, similar norms were grouped together. For instance, participants referred to various institutional regulations and shared beliefs on these among staff. We grouped these as affiliation norms, which apply to individuals employed in that context.

(4) The resulting groups of norms were checked again against the summary table, and, if needed, the transcripts were revisited to ensure that the researchers had interpreted the interviewees' meaning correctly. For more ambiguous parts of the interviews, we used member checking and asked the interviewee if we had interpreted what was said in the way they had meant it.

(5) Third round of analysis: the first two authors continued the analysis by further grouping the earlier found groups into larger, more abstract groups to try to find commonalities and differences between the emerging larger groups. As a result of the third round of analysis, we created a scope hierarchy of norms (see Figure 1) that allowed us to discuss the extent to which various groups of norms might apply to educators. Tables A1–A6 provide examples of how we placed the quotes from the interviews into categories and how we grouped the categories into the scope hierarchy of norms.

(6) The researchers who had not been involved in the second round of analysis read the results to check whether these reflected what was in the data and whether the grouping and naming of the groups made sense to them.

(7) Finally, we reflected on the results against previous studies on the topic in the discussion, Section 5.

The examples of interview quotes in the findings section were chosen from several different interviews. We made a conscious decision not to include identifiers in the quotes to protect the participants' anonymity. In cases in which several quotes came from the same interview, the combined information of the quotes might reveal too much detail about the person and compromise anonymity (for instance, social identity, nationality, and the topic one taught).

3.3. Credibility

We took several measures guided by Cresswell (2013) to ensure the high quality and credibility of this qualitative research project. First, when we invited educators to be interviewed, we aimed for maximum variation in terms of educators' geographical and cultural background, career stage, teaching experience, and social identities. When conducting the semi-structured interviews, we asked follow-up questions to clarify and ensure that we had understood what the interviewee said correctly. In the data analysis phase, we used researcher triangulation. We did the round one analysis in pairs, in which one was from the same culture as the interviewees (if possible) to ensure that we were able to understand any possible cultural references. The second round of analysis was done in close collaboration by two researchers, and further, the findings were read by all researchers to ensure that the findings were in line with the data and that the structure of the findings made sense to all the researchers involved in writing this paper. In addition, we used member checking and asked what the interviewees had meant by some accounts to ensure we had interpreted some ambiguous accounts correctly. In reporting on the findings, we aimed to provide a rich description and added both summary tables and original quotes from the interviews to the findings section to enhance the transparency of the analysis and to let the interviewees' voices be heard through the text.

3.4. Positionality statement

The team conducting this study is composed of seven computing or engineering educators and researchers who practice in different parts of the world on three continents (Africa, Europe, and North America). Four members identify as immigrants, living in places (Sweden and the US) that do not correspond to where they were born (Germany, Mexico, Romania, and Spain); the rest of the team live in their country of origin (Botswana, Finland, and the UK) although they have experienced multicultural spaces of living and learning too. In this sense, our group combines the experiences of people who, to different degrees, understand and conform to the cultures and languages of certain places with individuals with experience navigating norms that had to be learned from an outsider's perspective. Similarly, we have been part of different types of institutions and understood that there were unwritten rules depending on each institutional environment. We find this diversity to be relevant for this study, as we are aiming to capture the essence of computing educators navigating the norms of the field that are prevalent across different cultural contexts.

Most of our team are cisgender women, one member is non-binary queer, and one is a cisgender man who has been an ally for gender equity in computing throughout his whole career. The racial composition of our group is majority White; three members have been identified as racial/ethnic minorities as defined in the European and US contexts, yet one of them is now practicing in the African context, where ethnic diversity is defined differently. Additionally, some members of our team identify as having lived with mental health conditions while living and learning in computing/engineering spaces. Our individual research agendas are varied, including gaming, teacher training, curriculum development, sustainability, emotions, role modelling, care, and institutional change, all within the context of computing, engineering, or STEM in general. However, there are two collective threads that we all aim to address through our research: (1) expanding access to computing and engineering education and (2) reimagining what educational experiences in such contexts could look like. At the intersection of our identities and current research, the team composition has a collective keen understanding of how alternative epistemologies have historically been excluded in computing and engineering (Ross 2022). This is particularly relevant in the context of emotions because emotions have traditionally been assigned a feminine ethos that has been historically excluded from STEM learning. We collectively advocate for a redefinition of the exclusionary norms that have long been endorsed in computing and engineering education; as such, we see our work as an opportunity to contribute to the scrutiny of such norms.

As we embarked on this study, we expected to touch on sensitive topics with our participants, as we knew we might trigger unpleasant memories derived from previous experiences. In preparing for it, it was useful to reflect on our collective record of experiences, such as those involving sexism, xenophobia, queer/transphobia, or stigmatised views about mental illness in the context of our field. This reflection, in combination with our preparation for ethical approval processes, supported the team as we kept the safety of our participants an utmost priority while designing our study and developing our interview protocol from a care perspective (Toombs et al. 2017).

For most of the team, this was not the first time working together (see Grande et al. 2022), so we previously had the opportunity to reflect on the kind of collective positive impact we aim to have, with a priority to legitimize the role of emotions and care in academic spaces. As such, throughout the execution and writing of this piece, we have made a conscientious effort to model caring for each other, intentionally being open to discussing emotional challenges derived from mental health as well as life in general, cherishing each other's triumphs, and offering mutual support through tough times, in what we believe is an effort to intentionally building the shift in the culture that we are envisioning for the field.

The execution of our interviews was an emotionally taxing process for many of us, because participants shared quite raw narratives of sensitive experiences. Multiple discussions of what we were observing allowed us to unpack the emotions we were going through as we heard and read the experiences of others. To further allow ourselves to fully acknowledge our emotions throughout

our work, we nicknamed our group 'The Emotionals'. To prioritise our well-being, the lead authors consistently transmitted the message that our well-being and mental health were basic needs that we should not compromise on during the execution of this project. We also want to acknowledge the conflict between preserving our participants' anonymity and giving them proper credit for their perspectives shared in this work.

3.5. Ethical considerations

This study has received multi-institutional ethical approval for data collection and analysis in Finland (internally reviewed by the institution), Sweden (national process, diary number 2024-01739-01), the UK (institutional 300230103) and the US (two different institutions, STUDY00008264 and IRB-FY2024-214).

The information in the consent form given to participants included a mention of how parts of the interview might touch on some negative emotions or experiences, perhaps leading to difficulties for the interviewee and/or the interviewer, and that psychological support was available if needed (although this was deemed unlikely). During the interviews, we constantly monitored for signs of distress and checked several times whether a break, postponement, or even cancellation of the interview was needed. One participant reciprocated this care by wondering if the interviewer needed a break. This monitoring also included checking their level of comfort with sharing more personal aspects of their experience, which was confirmed when needed after the interview as well.

Needs were also negotiated. Several interviewees expressed discomfort with setting a time limit for the interview, e.g. anxiety from feeling like one was talking too much. Thus, when the interviewee preferred, the total time for the interview was not monitored. Other aspects of care have been detailed in the positionality statement.

4. Findings

Our research question asks what norms (of any kind) computing educators use as criteria for their emotion display when teaching.

Following Gibbs's (1965) classification, different kinds of norms were mentioned by the interviewees. There were references to what was expected, what should be done, and reactions to behaviour. A few norms were explicit rules, such as institutional policies, while others were beliefs shared by and applied to different groups in varied contexts. Some norms were directly emotion norms, whether to refer to expectations of what should be felt or displayed; other norms were not explicitly about emotions but were indirectly connected to or were the trigger of an emotional reaction. For instance, the institutional policy of having to prepare a syllabus within a certain deadline could have been a factor in spreading the social norm 'teaching staff should be organised.'. This expectation of being organised in the workplace may, in turn, trigger emotion norms such as 'avoid showing confusion when teaching' so that one does not come across as not having prepared enough, i.e. being unorganised.

In this section, we describe various identified scopes of norms, representing them as a scope hierarchy and noting how they are complexly intertwined and nested. After presenting various experiences of awareness and conformity to (or circumvention of) norms, we dive deeper into each of the levels in the scope hierarchy.

4.1. A general structure for the scope of the norms affecting educators' emotion display

We organised the norms by their scope so that we could discuss the norms and their co-occurrence in a more structured way. By scope, we refer to the extent to which the norm in question may apply to a group of people. For instance, some very general norms, such as moral norms,

may apply to all teaching staff, whereas some social identity-related norms apply to certain groups of educators only.

In addition, both the situation and the educator's identities can greatly affect which norms are more salient and applicable. Thus, we discuss the complexity of the combination of the norms, and how they can be nested. In Figure 1, we illustrate our scope hierarchy for the norms identified, described below, and follow with a few examples.

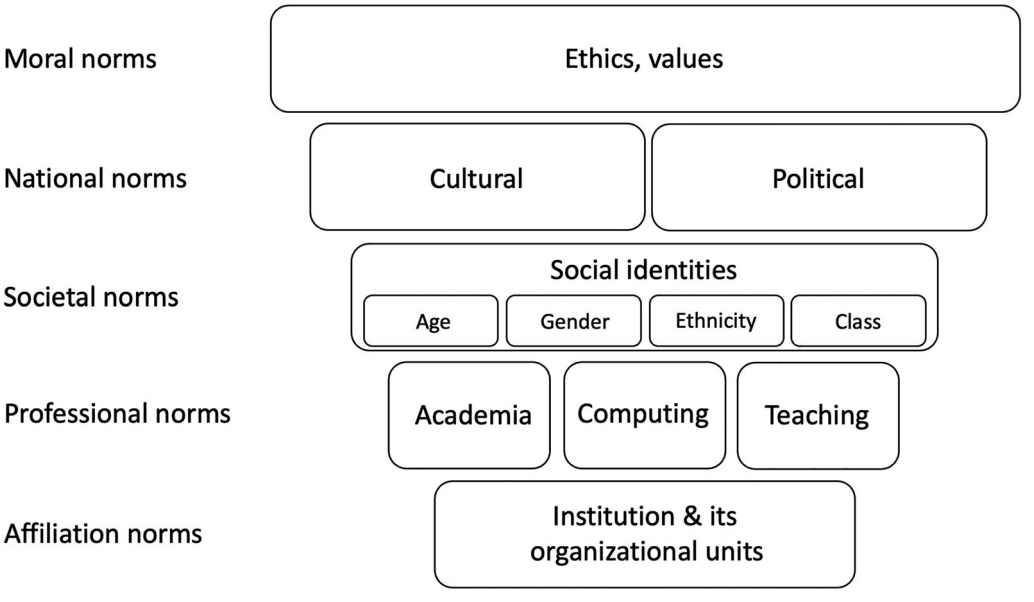

Figure 1. A scope hierarchy of norms, from the widest scope at the top to the narrowest at the bottom.

Moral norms – universal moral or ethical rules – represent the widest scope for norms in our findings. While these are culturally situated, their reach is quite broad. These are the norms that are commonly considered to be obvious, in that 'everyone' should know and follow them, especially since they may be supported by the law, e.g. 'do not harm others'. However, their relative universality does not mean that they are never disregarded. In narrower or more specific contexts, these norms may be revised or broken, e.g. 'you must not lie' may be trumped by 'as a teacher you are to always be perceived as confidently knowledgeable (even when you do not know the answer).'

Narrowing the scope, we have norms connected to the educator's geographical context: national norms, which may refer to the culture of the country the interviewee was born, raised, and/or currently lives in, to more complex combinations for those with multicultural backgrounds. For instance, immigrants among our participants described the clash of norms and experiences between expectations in their current country and their memories in their country of origin. Within a country, there are societal norms connected to politics and what the government dictates, whether specific written rules (laws, policies) or unwritten expectations. These can affect freedom of speech, for instance.

There are also culturally situated norms about social interactions, such as what is considered to be (not) polite. Here we take a closer look at social norms connected to how we identify and how we as a society perceive different social identities, such as gender, age, ethnicity, etc.

Those norms may trickle down to the specific professional scope: being part of academic life in different roles, of a discipline (computing) as a researcher or practitioner, and of a teaching setting as an educator. While the lines between these may be blurry at times, we attempt to separate them for an analytical discussion.

Finally, there may be norms specific to the educator's affiliation, whether written policies or beliefs shared within an organisational unit, such as a department or research group. These may be influenced by the norms at higher levels of our presented scope hierarchy.

As mentioned above, not all interviewees discussed norms at all these levels, and scopes are not always applicable in this order. For example, academic norms may be influenced by their counterparts in a different country, given the international context of computing education; similar reasoning can be done for social identities.

4.2. Awareness and conformity to norms

Some interviewees were not able to pinpoint which norms affected their emotion experience or display or were unsure about them. For instance, one educator was unable to predict their colleagues' reactions confidently, thinking aloud that 'That [my decision] might be controversial,' i.e. being unsure about shared expectations on what would or should be done were in that context, and whether there were potential sanctions attached.

The perceived absence of norms could be expressed with confidence, stating that there were no norms that regulate the emotion display or behaviours in general. Certainly, one perception was that these norms were not taught or discussed explicitly:

> No, no, there's nothing […] there's no induction […] nobody takes you under their wing, and say, this is how we do things. So, you just do things the way you think they should be done, but nobody sits you down and says, this is what we do […] It's just your ethics, and your, like you say, your culture, and your upbringing, and how you relate with other people.

Even though this educator starts by saying that there are no norms, their reflection moves toward what we identify as universal or moral norms, understood as what one thinks is right from an ethical perspective. We then interpret other norms as part of the national and societal norms levels, as 'your culture' and 'upbringing', interactions with others in general. There is no mention of formal rules by governments or institutions, nor of explicitly professional ones. However, it could be argued that the absence of explicit mentoring or rules constitutes a norm: 'the institution expects that the educator shall follow their own ethical principles'.

Other educators were more explicit and able to pinpoint norms of various kinds. For example, one educator identified several types of nested norms in their context:

> Finnish work culture is very focussed on the task, and emotions are not often highlighted. And in this university world, the academic world, perhaps even less so. And then there's the field of information technology, which is predominantly a male-dominated field, and that also influences the fact that men generally process and express emotions less than women.

For this educator, norms go from the broader cultural context (the geographical culture of Finland) to the more specific setting of academia and the discipline of computing within that. Then computing is analyzed from a demographic perspective, bringing attention to a binary perspective of gender (perhaps based on legal gender, as research on statistics in this area tends to be). While not all these norms are emotion norms, their entanglement is affecting this educator's decisions on emotion display. For example, the social norm 'In Finnish work you should focus on the task' is not explicitly about emotions. However, the educator connects it to 'emotions are not often highlighted'. In our analysis, we interpret an implicit connection (as more explicitly expressed by other interviewees): 'Focus on the task', but (implicitly) 'emotions distract or are not part of the task', thus, explicit emotion norm: 'emotions are not shown or discussed'. This belief is only exacerbated by the other layers of norms, such as the academic norms, similarly analyzed as another context with little room for emotions. The quote ends with an explicit emotion norm, both on feeling and expression. Both aspects are seen as gendered and more salient in the context of computing. We interpret this as the gendered emotion norm coming from the cultural level (social identities, gender) and 'trickling down' to the professional norms level, where the context (gender

imbalanced) makes it more apparent. We note that the moral norms and institution scopes of our framework are not mentioned in this participant's quote (although they are mentioned in other parts of the interview).

Being aware of norms did not always mean that one should conform to them. This was especially noticeable when clashing norms were considered. For instance, having a working-class background gives the notion that one is not so confined by the expectations associated more with the middle or upper class. Norms can also clash when they are of different kinds, such as institutional policies and moral or professional norms. One educator described how they decided to break the institutional policy of only allowing those students to re-sit an exam who can provide a sick leave certificate. Listening to students who shared struggles in their lives that were not accompanied by officially approved documentation, the educator deemed that care for the students should be prioritised and thus disobeyed this university policy by exceptionally allowing retakes without the certificate. In our scope hierarchy, this can be seen as the moral norms (care) trickling down to the context of teaching and trumping institutional policies below.

Whether one decides to conform to a norm is connected to the perceived (lack of) sanctions. For example, some institutional norms could be bent since there were no significant consequences for teaching staff:

> So, I do have filters [for emotion display], but they're very coarse-grained. [laugh] […] I'm not super worried about them [the students] being, like, feeling that I'm a cool authority. What are they going to do to me? Like, give me a negative course review, oh, boo-hoo. Nobody reads those anyway. [laugh]

This educator implicitly refers to the institutional policy of course evaluations being important documents that the teaching staff should consider with care (stated in written instructions to staff and students, what ought to be done), contrasting it with the actual perceived practice, the norm, of 'nobody' even reading said course evaluations (what is expected, as observed in colleagues' behaviour). Therefore, there are no perceived consequences for teaching staff of students complaining through this channel (unless many of them do), and this educator thus feels a high degree of freedom in their emotion display. This perception about course evaluations being irrelevant indicates an absence of both sanctions and rewards for following the institutional norm of caring about course evaluations.

All these perspectives came together for some teaching staff: being aware of norms yet not feeling like one neatly fits their target group, and thus expectations and consequences are unclear. Consider this educator, who shared belonging to different marginalised groups:

> [Because of several of my social and disciplinary identities] I'm already breaking a lot of norms, so why not continue? People don't really have well-defined expectations of how I should behave, and that makes it …a lot easier for me to, like, I have to do something outrageous to be a problem because I'm already in, a more weird-ish.

This example shows how intersectionality affects norms and whether to conform to them. While this educator could identify norms of different kinds that related to various aspects of their identities, the combination of these norms (and the impossibility of following all of them simultaneously) made the educator feel that they were outside the expectations represented by these norms. Thus, others may not know what to expect, and therefore, within a certain threshold, one can behave outside what is expected of others without considering sanctions. Here we highlight again that this means one avoids negative consequences but can also be deprived of the positive rewards emerging from conforming to norms.

Both the structure we have provided as the general structure of our findings and the examples that accompany it show the complexity of norms that affect the emotion display of computing educators. We now proceed to detail the varied types of norms at different levels of our scope hierarchy, supported by participant quotes.

4.3. Scopes of the norms affecting educators' emotion display

In this subsection, we delve deeper into the levels represented in the scope hierarchy, shown in Figure 1. We accompany our analysis, illustrated with unpacked quotes, with tables that represent norms at different levels. All tables (Tables A1–A6) have the same structure. In applicable instances, the first column captures non-emotion norms that may trigger emotion experiences or displays. Norms on emotion, whether display or expression, are captured in the next column. When appropriate, an example of how the emotional display is affected is compiled in the third column. Finally, a quote is always shown in the fourth column to illustrate these findings.

4.3.1. Moral norms

While they were present, moral norms were less prominently mentioned in the interviews. We attribute this to this level being taken for granted: moral norms are something 'everyone' knows, as one participant signalled when referring to the lack of an onboarding process in this regard. These norms were mentioned in the interviews in combination with norms of other types. Thus, we do not include a findings table for this scope level of norms, but instead, we refer the reader to other levels below.

4.3.2. National norms: cultural norms

Norms connected to a geographical cultural context mainly fell within emotion norms: what emotions were expected to be felt and/or expressed, and to what extent or intensities. These findings are presented in Table A1. The emotion norms shared in these cultural contexts are further intertwined with workplace-related norms, social class-related norms, and considerations for the international community, for instance.

While some participants did not specify a region when evaluating their criteria for emotional display, they seemed to point to shared beliefs among members of their societies in general. These beliefs implied that negative emotions, especially anger, should not be displayed in any way; however, there were exceptions, especially when accounting for the intensity of the display.

Discourses on emotions and emotion norms are cultural in a way that is particularly dominated by so-called neurotypical[4] perspectives and experiences. An autistic[5] educator described struggling with identifying and describing emotions, so they consulted a book on emotions to prepare for the interview. In this book, The Emotionary, the author breaks language (cultural) norms by making up new words for emotions they otherwise cannot describe. Other teaching staff mentioned how draining it could be to conform to norms on social interactions (how often to interact with others and at what energy levels), especially for introverted educators.

Emotion norms perceived as being shared within a specific geographical region could refer to the display of emotions in general and the extent to which this was done. For instance, some participants from Finnish institutions described perceiving professional norms that limited emotional expression:

> The Finnish cultural background influences this […] it's not a culture where emotions are readily shown, except maybe to the closest family members or friends.

The reference to people in one's close circles signals the display of emotions as something to be done in private or in close relationships, which we interpret as something some teaching staff may see as being incompatible with a work environment. This is further explored at other levels of our scope hierarchy.

Rather than focussing on emotions in general, other emotion norms were focussed on particular emotions. An example in Sweden connects to the so-called 'Jante's law', a shared belief that one should avoid giving the impression of being above others, for instance, by talking about one's success. This regulates how much pride is shown about, for instance, one's own work. However, this was described as a clash with pedagogical norms that justified showing (role modelling) some pride so that students may learn that it is valid and encouraged to feel proud of oneself.

Cultural norms on emotion display were considered important to follow when one changed cultural context. For instance, one participant considered having to practice their emotional display were they to move to the US. This cultural context was described as one where the educator would be expected to show positive emotions outwardly, 'in an over-the-top way', since otherwise observers could interpret that the educator was angry.

4.3.3. National norms: political norms

Participants shared their reflections on norms connected to the political situation, such as oppressive regimes, the law, or a colonising approach to the practice of computing, sometimes described as apolitical. These findings are presented in Table A2.

Some educators shared experiences of having to conform to norms that sprang from official authority, such as their government, and could thus be enforced and result in severe sanctions. Expressing opposition to the government or making certain political statements, one educator stated, 'could get you killed' or have severe consequences. To prioritise and preserve our participants' safety, we focus on recollections of experiences in countries with oppressive regimes under which the educator is no longer located. While these experiences do not apply to their current ones, we believe they can match the current experiences of other educators not directly included in our study and who may not have a safe way to share their own experiences.

This educator and their colleagues found ways to signal opposition to the government through humour, in a less direct manner:

> Of course, I lived in a period when you couldn't say anything against the government in your classes. Politics were basically totally excluded from the courses we taught. That didn't mean that in class we were not alluding to certain situations, usually with some jokes, of which students could understand that we were criticising the government. That was a common thing in many courses. That was a rule. Everything was supposed to be good. Everything was commendable. At times when everyone was suffering from hunger and lack of heating. […] And there were emotions, surely, there were, but it was a violation of some rules; in fact, the rules were to obey and know your place, to accept everything that was happening.

Teaching is described in this context as having the norm of staff agreeing with the government and its actions. Whether this was a norm directly expressed in law and policies or more of an unwritten shared belief is unclear. The term 'rule' in the quote is ambiguous. But there is a description of an emotion norm, or rather of how this expectation of what to feel was violated when one felt opposition to the government, such as observing famine in a context supposedly going well. There is also a way to circumvent this norm by using humour that students are expected to understand as a form of protest.

Participants also shared how being in these situations meant being isolated from the evolution of the discipline outside the country, and that was yet another strong and painful reason to leave.

Another connection to politics was raised by describing norms on computing as a space impacted by colonization, and computing as apolitical, in connection with the academic system and the discipline. The imposition of technological solutions on Indigenous populations without respect for their knowledge or an understanding of their context or problem supposedly addressed was described as 'almost violent emotions where people basically are acting as colonisers, with pretending they're not emotional'. Participants experienced the normalisation of violence in computing as forcing solutions on populations and disconnecting this from aggressiveness or any other emotion. Current practices positioned computing professionals so that 'a lot of the ways in which we support illegitimate capitalism and abuse of power in the discipline, those are forms of emotion', hidden but embedded in the system. Thus, political acts of colonisation are described as related to emotion norms on aggressiveness and violence that lead to abuse, with little resistance to this violence from the professional community.

Attempts of such resistance in a teaching context against the colonised system could start by understanding students' plagiarism as going against an oppressive system:

> […] you could see that [plagiarism] as an encouraging indication that students are resisting the brutality in the system, because it's a system that's holding them from opportunity in life. They didn't create the system. They're not part of it. They're trying to survive in it. So, any strategy is valid in that worldview. And most of us don't look at it like that.

Here the educator connects the violence in the system, and how pervasive it is, to the impact on the students and how they may react. This emotional reaction is validated, while acknowledging that many educators do not understand the violence or its impact; they are not aware of the norm and thus fail to understand reactions to it. Other attempts to go against these norms of colonization and abuse included bringing up in the classroom these same topics on colonization and other inequities. However, in turn, this could feel unsafe for the educator.

Finally, explicit laws were mentioned as obvious norms that needed to be followed to avoid severe repercussions.

Overall, the norms our participants described at this level were connected to what authorities regulated in the classroom, often with force and little to no possibility of retaliation. These norms governed what could be said and thought and thus triggered emotions and considerations of whether to show them.

4.3.4. Societal norms: social identities

Here, we include norms related to social class, gender, age, and ethnicity and their intersections. We try to reconcile different definitions of these terms globally. For instance, ethnicity here refers to cultural background, language, skin colour, traditions, etc. These findings are presented in Table A3.

Norms related to *social class* were perceived as what is expected and valued in an academic context in general (and not just in terms of emotions). This educator reflects on navigating an unknown environment with norms one could not fully understand, express or relate to:

> […] there are some differences that are hard to put into words. But in talking with some colleagues, we [academics with a working-class background] also have that. We also feel like being a bit of a visitor in the academic setting, or like a tourist or intruder, or like, not really being aware of the norms.

When awareness and understanding are reduced or inexistent, the sense of belonging of educators with a working-class background may be affected to different levels, from someone who is in the group but not perceived as fully being part of it (a visitor, tourist) to even someone who others think should not be there (an intruder).

Social class could be perceived and expressed through, e.g. clothing. This could be interpreted as a factor in gaining students' respect and attention, especially in combination with age and even when breaking other norms, like ones on teaching. One educator described their perception of other teaching staff:

> […] while [the educator] was doing this [breaking the teaching norm by being off script on topics not directly connected to the session], she was also nicely dressed. She looked like an academic. She was clearly in her, at least in her 40s, like, she had things going for her to balance up the responsibility and sort of stuff.

Here, clothing of a certain kind is associated with social class, and age is linked to experience/competence/responsibility, resulting in a combination of how an academic is expected to look. Conforming to those norms gives this educator the freedom to deviate from other norms: that a teacher in computing should not go off script, speaking so informally and disconnected from the topic at hand. Disregarding the latter norm, the educator still gains the sanction of being perceived as a competent professional.

Some interviewees noted that in non-working-class settings 'the rules of propriety are stricter the more we are in the middle class or upwards'. These restrictions were perceived partly as emotion norms, limiting which emotions and to what extent to which it was considered appropriate to express, particularly for anger, frustration, and other negative emotions.

Norms on *gender* were usually expressed in a binary view of gender, associating femininities and masculinities to behaviours, and expectations for people of different genders.

A wide emotion norm is that no emotions should be shown or even experienced:

> I feel like because it [the discipline] is a bit male-dominated, that the female side of things can be looked on as a negative. So, yeah. So emotions, for example. […] I feel like it's a negative thing to have emotions be the reason why you can or can't do something.

Emotions, in general, are regarded as something feminine that may prevent teaching staff from doing their job well, i.e. they are an obstacle to competence, and there is no place for them in a male-dominated environment.

Educators aimed to conform to these emotion norms and succeeded to different degrees. Another emotion norm related to women being more emotionally expressive, which made for tampering down of emotions in a male-dominated discipline, where men are 'strong'. A man educator reflects on the importance of hiding sadness if you are a man, conforming to the norm:

> If maybe I'm sad for example, I wouldn't want to cry in front of those students, because men are known to be strong and stuff like that.

As a woman educator described, women surrounded by male colleagues may want to appear strong in a similar way. However, conforming to this emotion norm implied a clash with moral and teaching norms on care for the students:

> […] it is perceived that women show emotions more easily, so I probably hide those negative feelings, especially when younger for the reason that I wanted to appear strong in a male-dominated community. […] I want to appear strong but at the same time approachable.

Being approachable, in turn, was perceived as affecting the workload distribution from a gender perspective. Care for the students and the community was regarded as disproportionally expected from women as opposed to men. As a result, men conforming to this norm were perceived as having the positive sanction of being able to prioritise meeting promotion criteria. This was exacerbated by gendered decisions on course distribution. In another form of expectation of care, men were seen as being assigned to courses according to their expertise and interest, while women took the rest regardless of their knowledge.

Norms on *age* were connected to competence, reputation, and care. Younger teaching staff were expected to be less competent and have less responsibility. However, being closer in age to the students made it easier to connect with them and made one's teaching more informal. Age perception may vary; HRT (hormone replacement therapy) may make some trans educators look younger. Big age gaps could also lead to similar low expectations of competence, although those could also be interpreted as higher competence. Thus, educators in their, e.g. 40s, could be perceived as being at the 'right' level of competence to induce respect as academics. Being older could allow the educator to act as a caring authority, 'as a big brother to [the students]', which in turn motivated displays of, e.g. anger or pride.

These expectations of competence were also connected to norms on *ethnicity*. Immigrant educators feared being perceived as less competent than the locals due to, e.g. different educational systems in their country of origin (a developing country) and current country. Emotion norms were attached to emotional displays expected to be of higher intensity than the locals', e.g. citizens of certain regions expected to be more friendly than the locals, or to 'smile more'. This could, in turn, connect back to assumptions on competence not only for immigrants but also for ethnic minorities. This educator in the US describes regulating their emotional display after considering stereotypes and how they affected how the educator could be perceived:

> […] I'm very comfortable expressing my happiness, or my energy, or my passion. But when I am in a setting in which I need to teach students, I feel less comfortable because I feel that that can be an stereotype that they have about me and so I am very self-aware of that. […] the stereotype of a Latina in the United States, which I think it's someone who is very excited and energetic, and who's probably, I don't know, who may be in the professional stereotype is not doing anything in tech. […] [in a faculty meeting] I was talking very energetic about something that I was doing and then another faculty member said something like, 'I really love how

> your people are always so happy, and excited, and showing those feelings.' And I felt very self-aware and then I was like, yeah, I don't want to show this.

This example also shows the intersection of ethnicity and gender. In the US, Latinas may lower their emotional display, even when the emotions are positive, to avoid conforming to stereotypes (held by both students and staff) that the educator perceives as damaging the educator-student relationship, especially when the perception is of a lack of competence.

4.3.5. Professional norms: disciplinary (computing) norms

Computing was perceived as a hard discipline that is not for or welcoming to all, as separated from emotions, with a strong base on facts rather than opinions. Educators may agree with these norms or be aware of them and challenge them. These findings are presented in Table A4.

Computing was perceived as *hard to learn* generally and for specific areas. Programming was one of them, especially since students could pass courses without having acquired the knowledge, making their next courses even harder:

> Especially in programming, it could be frustrating to try to teach someone something like… They should have learned, like, already. And then they have sort of faked that they have learned that and sort of got them by…And then later you need to explain it again several times. And…But there in those situations I really try to avoid actually expressing…expressing any emotions to… Because I know it's hard to program and it's harder to some.

Emotion norms dictated that frustration would not be displayed to avoid the students feeling that they lacked the geek gene, the expectation of *innate computing talent*, i.e. that they were incapable of succeeding in computing:

> It ruins the whole learning relationship by…Show anger or frustration. Because what I then communicate is that I think that the student is…not good enough. I mean, that's what the student will get. That if I become angry with someone who doesn't understand something…It's like, okay, I'm communicating that you're incapable of understanding. So, that will definitely be a self-fulfilling prophecy.

Computing is expected to be *separate from emotions*. If content related to emotions is included in the syllabus, students may react:

> […] And then I realise, if they [the students] are technically oriented, when I speak about user needs and business perspectives, and highlight, we also deal with users' emotions in the course, they feel, 'What is this course, really? This is a bit strange content-wise and here's this teacher behaving a bit differently [laughs].'

This impression from the students may be exacerbated by an educator's approach to teaching as 'cold', shown in ways such as being strict, or a flat delivery. As this educator shares:

> [Our organisational unit] is in large parts very unaffectionate […] and the norm I get from the older teaching staff is sort of like a cold way of teaching. Like, maybe it corresponds with their [the teaching staff's] personalities, that they are not people who express emotions. I don't know. It's sometimes a bit violent in not being acknowledging emotions. […] there's like this…a bit hard attitude that you should just do the work in a way. Like…maybe that is corresponding with the sort of programming tasks being sort of soulless in themselves, like you're just solving problems […] I know that sort of newcomers can get the impression that it's an unfriendly environment. [Some teaching staff here are] being perceived as very harsh.

In this example, we find another reference to emotions getting in the way of completing a task, particularly programming tasks that should have nothing to do with emotions, as they are 'soulless'; thus, teaching staff conform to the emotion norm of not displaying emotions. However, this may be interpreted as displaying negative emotions, such as different levels of aggressiveness. Even if the educator feels violence in conforming to the emotion norm of not showing emotions, they are still looking to the more experienced (at least in the institution) staff to understand what is expected in this environment.

These 'soulless' tasks are part of computing perceived as *not questionable*, as everything is based on facts and not opinions. Then 'there's something a little bit more safe and secure in IT that makes it so I [as educator] don't have to have the hard talks [laughs]'. Then confrontations may be avoided, especially if being emotional prevents the educator from participating in the discussion. However,

this did not apply to specific computing subjects that were perceived as being sensitive –and somewhat political– without a specific 'right' answer, nor those which were up for debate, such as sustainability (mentioned as 'one of the topics more likely to get students rolling their eyes').

Similar resistance was associated with the norm of computing as *not welcoming to all*, with different levels of agreement by others. Some students appreciated discrimination topics being raised during teaching, while others signalled that this was wasting time instead of 'doing something important'. The educator then was 'fighting against the culture of the discipline and how the students have been brought into that,' which was 'quite a risky space for an academic.' The educator may not feel safe, especially in an academic environment described as policed. Here norms combine, when discrimination may be regarded as outside what should be in a computing course syllabus in its non-questionable content.

4.3.6. Professional norms: academia and teaching

The participants elaborated on several norms that shed light on the expected forms of behaviour in academia in general and in the role of educator in particular. These findings are presented in Table A5.

Many norms related to caring for the students in different ways, as expanded below. Some educators emphasised that emotions are not strongly present in academia. When elaborated in more detail, several educators mentioned that the general emotion norm is not to show negative emotions verbally or through gestures. The intensity of the emotion was a factor, e.g. one educator was comfortable showing anger in a way similar to disappointment, while others completely avoided any sign of it. Overall, the caring guiding emotion norm was to *avoid displaying any emotion that would damage the students' learning and their relationship with the teaching staff* . As one educator put it:

> Well, [choosing what emotions to display and express] is mainly about maintaining the relationship. I mean, I see emotions as a language, or relational language. And…If my emotional reaction would risk… sort of harming the learning relationship… Then it's a bad… [way to show that emotion]

However, emotion norms on which emotion displays to avoid harming the relationship or the perception of one's professionalism were not exclusively for negative emotions. Unprofessional behaviour in teaching may include *humor or some other lighter elements*. An immigrant mentioned that 'cracking the odd jokes' could raise eyebrows in their country of origin. Another educator described how acting in the classroom less seriously, or 'goofy', as they expressed it, could be met with judgment, so they 'try to cut out all the personality bits'. Amusement would be expressed only if the educator felt that they 'were laughing together' with the students, e.g. a silly mistake is made that does not signal the student as incompetent.

The *educator being perfect*, knowing it all, and making no mistakes was perceived as an expectation from the students. Some educators embraced making mistakes and displaying vulnerability. This was especially salient with material that can be or is better left prepared only to some extent, like live coding. One educator described how students assume that the teaching staff get things right from the first attempt, making colleagues (but not the participant) uncomfortable with the vulnerability of making mistakes in, e.g. live coding:

> […] we [educators] go to class with prepared materials, we code, things run fine and students will think the first time we, the lecturers, code we get it right, but we don't. […] that's something [making mistakes in front of the students] that not all academics are comfortable to do. I've had quite a few chats with some of my colleagues and some of them said they can't ever do that. They can't live code in class, like, mm-hm. So for some people, I think when a code crashes or when they make mistakes, it probably just makes them feel uneasy. But for me, how I feel on that, that's how I teach.

Live coding is then a setting in which the educator is bound to make mistakes. This can be taken as a teaching opportunity, even inviting students to participate in the debugging. Other mistakes may be in spelling, which affects coding. An educator with dyslexia described these as more obvious and impossible to hide from the students, and how their comfort about this vulnerability increased with time. On the other hand, an experienced educator talked about the irritation and

frustration of not wanting to admit the mistake or lack of knowledge, instead acting 'as a politician', deferring questions, or falsely promising to get back to the students. All these examples can be interpreted as the implicit emotion norm of avoiding showing confusion and related emotions, and how teaching staff may deviate from this norm by displaying their emotional regulation.

Being organised, demonstrated as being on time and having a well-structured course, was experienced as an expectation very difficult to meet by educators with ADHD, who may even be perceived as lazy in a society not designed with them in mind. These difficulties are partly hidden from the students, so that they still perceive the course as organised, while accommodation in this regard is made for them so they do not have to deal with these obstacles:

> It's really hard to hide who you are. […] having ADHD is really tricky because being on time is really hard. So that's something I try to hide to some extent. I usually tell the students that I find being on time is really hard. And that they can expect me to be on time for the lectures. But I want them to know that if someone is sneaking in quietly five minutes past I start, it's fine. […] But yeah, so I'm kind of open with those things. But in terms of, so for example, structuring the course is hard. And I think that's hard for most people, but it is really hard. And I start to, I understand now that it's partly hard because I have ADHD. But it's, and that's something I try to hide from the students. To some extent, I talk about how certain things are hard, but I don't want them to feel like the course is a mess […]

Criticism was expected to some degree if it was 'aimed at addressing the issue at hand.' However, criticizing the institution where one works was a more delicate issue:

> But criticizing the institution, you have to be careful, because it's pretty resistant to that. It talks about being open, but it's not. […] It's policed.

We interpret the norm of not overtly criticising as being implicitly connected to an emotion norm of not displaying frustration, anger, or similar negative emotions toward the system. As the system is described as policed, a reference to authority and force, we categorise this as an institutional norm.

Educators were expected to *be receptive to the students' emotions and needs rather than sharing one's strong, unprocessed emotions*. Raw emotions could be expressed orally but not displayed unprocessed; that is not what the subject is about:

> I think we can talk about crying, but you shouldn't be processing raw emotions during teaching because I think that would give…the students aren't there for that. And it's too…it's distracting from the material. We don't teach, even if you're doing psychology that would be too much and we're certainly not doing that. So, both for the kinds of students we have and, which is, like, the kinds of people who want to work with computers or at least work with people through computers but some kind of computer is in the middle. Then you can assume that they're not here to like learn the depth of the human psyche. […] that requires an enormous amount of emotional labour and just dumping emotional labour on people at scale is not a good approach.

This 'dumping' of strong emotions on students should also be avoided due to the educator-student power dynamics. One subject-specific case is sustainability and ecoanxiety:

> [Sustainability courses] tend to sort of have an aspect of trauma for us all humans. But […] is that trauma as a result of what the course is about, or is it the result of how you [as an educator] talk about these topics […] The teacher communicates their trauma, and that is in itself sort of the induced trauma in the students.

Emotion, such as ecoanxiety, is not attached solely to the material itself but to how it is shared and processed by the educator. The educator's trauma due to the climate crisis should not become the students' trauma. Thus, the norm is that emotion regulation can be supported by the educator for the students but should not happen in the opposite direction. Thus, once the emotion regulation had been (to some extent) done, strong emotions were communicated exclusively orally, sometimes as proof of care. For instance, one educator who had been sick throughout the semester shared this with them only at the end of the semester, adding that they had pushed through for the students' sake.

The educator should only listen; it is not part of the job to have students handle one's emotions 'but to be receptive'. However, this may not be what students expect. One educator recalls students saying that teachers *never cared about students* throughout their degrees, even though this belief

may not be shared by the teaching staff. Students may 'feel like a number', especially in large computing courses. Thus, showing care for the students as teaching staff deviates from the norm as per the students' observations.

Care from the teaching staff may be shown only to *students with innate talent*, while other educators challenge this norm with *care for all students*:

> [There is an educator] talking about the pure [institution's name], pure engineering students, […] the ones who should get the degree. […] roughly 10%. […] And this teacher sort of directs their teaching very much towards this top 10%.

Educators may expect *students to be independent* by showing time management and related competencies. They 'shouldn't be spoiled' by the teaching staff. However, as one educator argued, these may not be competencies that students come in with to their degrees, so the teaching staff can go against this norm by putting special care into supporting students with their motivation, time management, etc.

Emotion norms on communicating care referred to displays of emotions such as pride and happiness. It was 'justified to pat them [the students] on the back' when the educator understood their role as a sort of 'big sibling' figure. Higher levels of happiness and pride in students' achievements could result in hugs, which one educator described as challenging local expectations. At this level of happiness, some expressions may be embarrassing or regretted afterward, such as publicly praising a group of students, which was considered likely to negatively affect the rest of the class, and thus break the teaching norm of educators as caring for all students (or, conversely, seemingly conforming to the norm that teaching staff do not care about students).

Conforming to norms on the educator as caring implied being aware of and adapting to norms in other scopes, such as cultural and academic norms students brought with them from other backgrounds. The educator adapted their own behaviour for smoother integration and interactions with these students:

> They [international students] are sometimes a bit perplexed because they have a different experience of not being able to approach the teaching staff so casually [chuckles]. I may be even more outgoing with international students, so in a way, I mirror a bit how. If the student is somewhat reserved, then I might seek a more reserved role myself, and how much I show them, so the students aren't bewildered by my behaviour. I certainly control my emotions quite a lot, also those more positive feelings with the students. And then I deal with them […] after those occasions.

However, emotion regulation and considerations on emotion display become ever more complex when the educator is expected to be *a positive role model*:

> Am I doing a good job by just trying to manage my emotions given that there is people in the room that might try to follow my same path? And is it even a good path at all? Can I just be myself? And would they be more comfortable if I'm just being myself and showing emotions?

It can be difficult for the educator to tell when that adaptation based on the students' needs comes at the cost of losing one's own identity or even the care relationship with the students or with oneself.

A particular kind of role modelling as an educator is *showing enthusiasm*, expected because 'the teacher's enthusiasm is contagious', while 'it requires that you [as an educator] are in a really good mood, not stressed'. This enthusiasm may authentically be present to different extents, where the length of teaching the material may lower this enthusiasm and lead to exaggeration in its display. Thus, there are emotion norms on showing enthusiasm (sometimes leading to emotional labour if not truly felt) and on hiding stress or indicators of a sour mood.

4.3.7. Affiliation norms

As with moral norms, participants seemed to consider some affiliation norms as obvious, known by many or all, and thus were less prominently mentioned in the interviews. Institutional policies were

described as clearly stated. Some participants experienced these rules as enforced when applicable, as this educator describes:

> Inappropriate behavior, such as offensive attitudes about someone's gender, sexual orientation, ethnicity, or age, is not tolerated. These are officially recognised by the university's policies, which state that such behavior is unacceptable among both staff and students.

This example shows an affiliation norm that can reflect norms at a higher scope level. For instance, discrimination laws may be concretised in affiliation policies. Table A6 includes similar and other examples previously mentioned.

5. Discussion

There are various kinds of norms that affect whether and how computing educators experience and show emotions when teaching. The norms in our findings match previous research on computing and education. These included norms that could be shared and understood by individuals outside academia or computing, as they encompass so-called universal norms, i.e. moral norms, and cultural norms that affected how comfortable educators felt in their teaching and expressing some or all their emotions (Hagenauer, Gläser-Zikuda, and Volet 2016; Sutton and Wheatley 2003). Norms become narrower in scope when considering ways to interact socially, social identities, and norms enforced by official authorities like a government. Academic and disciplinary cultures get blurred with teaching ones and are intertwined with the norms that an institution or its organisational units share.

Whether one is aware of a norm and is affected by it to different degrees varies individually. We argue that some norms, such as moral norms and institutional policies, were known but not mentioned in some interviews because they were deemed obvious. Norms that were not obvious to all due to their narrower scope, such as academic norms, were thus not possible to understand or conform to by all teaching staff. This could have negative outcomes, such as lack of belonging emotions.

Despite computing being understood as unemotional (Ottemo, Berge, and Silfver 2020) (other than passion for technology) the teaching of computing is not. While computing and its teaching, in general, were described as detached from emotions or cold, there were also mentions of ethics (including sustainability and DEIA (Diversity, Equity, Inclusion and Access)) as subjects in computing likely to trigger emotions in both teaching staff and students. Moreover, topics such as programming were lifted as examples of when the educator may experience emotions due to norms around the nature of the work (hard) and the educational system (allowing students to pass without them having acquired the expected competencies). This is in line with a vast body of research in computing education on teaching introductory programming.

Educators, consciously or unconsciously, considered a set of norms to dictate whether and how to display their emotions. The norms in our findings match previous research on computing and education, as mentioned with the example above of cultural norms. Unwritten political norms showed how criticism could be policed, also noticed at an institutional scale, and yet computing, in general, was perceived as a discipline of non-questionable content (Ottemo, Berge, and Silfver 2020) (except for specific areas like ethics, including sustainability and equal opportunities). Norms on social identities were in line with research presented in computing education research venues dedicated to this topic, such as ACM RESPECT, e.g. emotions as feminine and thus not part of computing (Ottemo, Berge, and Silfver 2020), which overlapped with some disciplinary norms. Norms on computing being hard (Peters 2017) and the connection of innate talent and the geek gene (McCartney et al. 2017) overlapped with norms on care as an educator (Mariskind 2014). Within care, there was a balance between caring for specific students versus for the whole cohort, and caring for oneself as an educator, which could be affected by the norm of being a role model for the students (Grande 2018, 2023), especially of care (Grande et al. 2024) or as someone transmitting knowledge and enthusiasm (Grande, Berglund, and Daniels 2017). General reflections on care were on whether

emotion display helped maintain the caring relationship rather than on positive or negative emotions in appraisal theory (Pekrun and Linnenbrink-Garcia 2012).

Conforming to one norm may lead to breaking a different norm and thus dealing with the consequences of that deviation from the expected or evaluated behaviour in their teaching. Examples of crossroads of this kind included listening to students sharing their challenges (to go from assumed needs to expressed needs in care ethics (Noddings 2012) while also going against students' expectations of not being listened to) and making an exception for them by allowing them to sit an exam that would have required a more formal justification in accordance with institutional policies, for instance; i.e. conforming to care responsibilities as an educator breaks institutional regulations. These can be considered to be examples of educators as tempered radicals, where their values do not match the institution's values, and thus they attempt to change it from the inside (Meyerson and Scully 1995). This example also highlights that breaking a norm may be seen as positive, e.g. feeling that one is doing the right thing by supporting students. A different example where the experience is more negative relates more concretely to the context of computing education: in a male-dominated environment, aiming to be perceived as strong as the men clashes with a desire to be considered approachable as a caring educator. Notice how skipping institutional rules, in the first example, may have no negative consequences in institutions that do not closely follow compliance (as expressed by our participants); however, in the second example, whether one prioritises one alternative or the other, there is an unpleasant outcome. But it was deemed possible to balance the conforming and challenging of norms, as described in the example where an educator going off script (and thus breaking that teaching norm in the discipline) still was perceived as competent due to their presentation in terms of social identities and generally being able to 'look like an academic', i.e. some norms may be more important to follow than others in different contexts.

Changes in norms can be systemic. Our participants pointed to a gendered teaching workload distribution, which is coherent with research on care as gendered (Noddings 1986; Ylijoki 2000). Disrupting this norm, working towards a more gender-balanced distribution, could change emotions toward teaching: enjoyment and, conversely, boredom or not caring about teaching (as expressed by our interviewees) would be distributed more fairly. This is an example of change at an institutional level. Our findings show that this kind of change should be applied to different spheres of the computing educators' environment.

Our work has some limitations. Language may have limited the participants' ability to express their experience of emotions and emotional labour as educators – especially when the interview was not in the interviewee's native language. In addition, translating the non-English interviews into English proved to be challenging at times when the original language of the interview contained nuanced expressions of emotions that were not directly transferable into English. In these cases, the interviewer who had conducted the interview, often with native proficiency in that language, translated the account into English as closely as possible. Self-report methods to study emotions are common for studies in engineering higher education (Lönngren et al. 2024). While these rely on the emotions one is aware of, for this study we wanted to focus on how educators understood norms, and thus, it was a suitable approach for data collection. Given our positionality, the perspectives on emotions are presented through a mainly Westernized lens, something that can be addressed partly by expanding our participant list with educators in other cultures and with other identities. While we did have representation of certain identities, some experiences were not captured in this study. For instance, a queer participant mentioned not having experienced discrimination at work, and other queer participants did not comment on this, so our work does not currently include examples of antiqueer norms.

6. Implications and conclusions

Educators, consciously or unconsciously, consider a set of norms to dictate whether and how to display their emotions. In light of 22 computing educators' interviews, teaching computing in

higher education is indeed laden with emotions. The display of the numerous emotions experienced by educators is guided by various combinations of nested, context-dependent, and partly conflicting norms. One educator's reality certainly is not the same as the reality of another educator when it comes to norms that regulate educators' emotion display. Our data also provided examples of educators deliberately choosing to go against the prevailing norm(s), suggesting that (conforming to) the norms can be negotiated, at least by some and to some degree. Educators' accounts of ways they try to accommodate their emotion display to widely shared norms within their cultural and academic community brought up several examples of where educators had to perform emotional labour as they felt the need to hide their genuine emotion or fake one in order to conform to what is expected from them, e.g. by exaggerating excitement or hiding anger or frustration.

As for the implications of our results, we first highlight that the findings bring forward the emotional aspect of teaching in higher education and in computing education. This provides impetus to acknowledge and expand the range of competencies that educators can acquire beyond cognitive aspects. Where and when appropriate, teaching staff need to understand and handle situations with an emotional component, e.g. when emotion regulation affects their well-being. The pedagogical training courses and professional developmental workshops would be one concrete place where educators' emotions and emotional labour could be discussed (Hagenauer and Volet 2014).

Second, the findings draw our attention to the fact that there are several simultaneously present, nested emotion display norms, but there is a large variety in how educators experience which norms apply to them. That is, norms activate and nest in various ways depending on the educator's background and context. Educators would benefit from reflecting, individually and with colleagues, on what norms they can identify in their work environment, who these apply to, who benefits from them, and who is harmed. In other words, one should be aware of not only norms (whether they affect oneself and/or others) but also of potential rewards and sanctions associated with them. Then, discussions can be had about who can conform to the norms and, for those who cannot and if the norm is to be kept, how they can benefit from similar rewards and sanctions in other ways. Moreover, these discussions can shed light on uneven distributions of emotional labour, particularly among marginalised groups. Overall, these discussions would contribute to improving computing educators' well-being and work environment.

Third, change must be approached at a systemic level. Consider, for instance, attempts to change social norms: since the belief is sustained by what the educator believes others do and expect (Bicchieri 2014), individual change would not be successful; rather, the group's behaviour and expectations need to be addressed (Prentice and Levy Paluck 2020). An example of such an approach was taken in one of our departments, in which a norm was identified: research achievements were most celebrated, while teaching ones were not valued enough. This was addressed by adding announcements during staff meetings to celebrate teaching awards, particularly positive course evaluations, etc. To tackle uneven expectations and distributions of care, institutions can analyze how and why they undercare, and they can act on it by examining power dynamics, the purpose of care, and how diverse needs are addressed (Baker and Burke 2023b; Tronto 2010).

Finally, a wider perspective on what emotions and their displays educators are comfortable with in their teaching can positively affect Biesta's three intertwined purposes of education (Biesta 2020). The first purpose is qualification, through which students acquire the competencies needed for the profession. In computing education, professional competencies have been defined as the knowledge, skills, and dispositions needed in a specific context for a specific task, where dispositions are the socio-emotional components (Raj et al. 2021). Socialisation is the second purpose of education. It refers to understanding a group and its norms, where this paper more strongly contributes. Lastly, the third purpose is being one's unique, irreplaceable self. Role modelling aspects of these three intertwined purposes can be explored by educators from this and other ethical perspectives (Grande et al. 2024; Grande and Von Hausswolff 2020). Promoting ethical lenses for these reflections, rather than leaving moral norms as 'obvious', can

improve educators' awareness of their own values, and, thus, whether they are acting as tempered radicals (Meyerson and Scully 1995).

Tables A1–A6 summarising our findings on the different scopes and norms within them show that emotion norms could be connected to other kinds of norms. We have included non-emotion norms that our participants mentioned as connected to the emotions they experienced or thought other educators did. There were also mentions of non-emotion norms without an explicit mention of an attached emotion norm. Investigating these cases further is part of the future work in this direction.

As the focus of this paper was on the norms regulating emotion display, we were not able to analyze and discuss the educators' emotional labour in detail. Instead, we leave this topic for future work as we feel it deserves a detailed and focussed paper on its own. Further, the variation in emotional labour based on educators' social identities may also provide useful results for computing education communities. It would also be interesting to explore other aspects of teaching, such as fairness, impartiality, neutrality, etc. Overall, future work includes potentially developing a survey for broader data collection based on our current findings.

Notes

1. We refer to educators as a way to encompass the various stages of a teaching career, including teaching assistants, and different terms for teachers, such as faculty, lecturer, or instructor.
2. Transgender here is an umbrella term for gender identities that do not correspond to the one assigned at birth.
3. In some limited cases, generative AI solutions that use the GPT4 language model and are restricted for use by the university staff (conversations are not recorded or used to train the language model) were used to improve the accuracy of translation of anonymized, non-sensitive parts of the interviews into English.
4. Norms based on the existence of a ' typical' brain affect more than cultural norms. However, in our data the most salient aspect was on language, which we include here as part of culture.
5. We are aware of debates on whether person-first language should be used to refer to autism. Here we use the participant's language choice.

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Appendix. Interview protocol

Note: in the protocol included in this appendix, numbered questions refer to the ones the interviewees always asked, while questions as bullet points refer to those optional follow-up questions in case the interviewee did not mention important information or deviated from the topic at hand. Questions with the first word highlighted indicated a question more likely to trigger unpleasant reactions and thus the interviewer needed to monitor signs of distress more closely or directly ask if breaks were needed.

Thank you for your participation in this interview study. You have received a consent form, which you have signed. Thus, this interview will be recorded and transcribed.

[Recording started] We also request your oral confirmation of consent to participate in the study. Have you been informed about the study and consent to take part in it?

[Interviewee answers; stop if negative]

Interviewer: thank you.

It is possible that our conversion may touch on some negative emotions or experiences. If at any time you (or I) feel that the conversation is becoming difficult, we can choose to pause the interview and resume after a short break, or reschedule for another date. You may also opt to skip any question you don't feel comfortable answering, or stop the interview at any time.

If, following our interview, you feel that you would benefit from having some additional support, you can contact [local support, e.g. university counseling service]. Links to further support are also included in the participant information sheet.

The first round of questions is about your teaching experience.

Background questions

(1) How long have you been teaching computing-related courses?

- When and where have you been teaching (school levels)?
- Which topics have you taught (lately)?
- In which role(s) (such as teaching assistant, course leader,…)?

(2) What do you teach at the moment (this year)?

- Which level (bachelor's, master's, PhD studies) are the courses that you teach?
- How large are the classes that you teach?
- Do you teach mostly online, hybrid or on-site/in person?

Showing emotions

If you think about your teaching duties, you are, for example, in the (online) classroom delivering lectures, facilitating discussions, answering student questions,…

(1) Which emotions do you experience when teaching?
(2) Pick one emotion from the list that you told me. Can you give me examples of times/situations when you experienced this emotion in your teaching? [repeat for other emotions if there is time or the first answer was very short]
(3) Which of these emotions are you comfortable expressing when teaching?

- Which of these emotions that you express do you think the students may perceive?

(4) Which of these emotions are you NOT comfortable expressing when teaching? Why?
(5) Tell me how you decide which emotions you are or are not comfortable showing when teaching

- How do you take students into account when you decide which emotions you show/not show?

Cultures and identities

If you think about your culture and social identities, e.g. your gender, ethnicity, age, religion or belief system, disability, etc.,

(1) *How* do you feel that these identities affect which emotions you express or do not express when teaching?

- Why?
- Give examples.

(2) *Is there* a difference between how you identify and how people perceive you?

- If yes, can you give some examples or tell us about situations where the emotions you express are affected by these perceived identities?

Unwritten rules/norms

If you think about your work environment, such as your department, institution, etc.

(1) Are there any conventions or unspoken rules about how a computing teacher should conduct themselves when it comes to showing emotions when teaching? Please give examples.
(2) What kind of conduct would 'raise eyebrows', that is, what would be considered as not acceptable when it comes to showing emotions when teaching?

- Follow up if not mentioned before: whose eyebrows are raised? Students', fellow colleagues',…?

If you consider all these unwritten rules based on identities, work cultures, etc. that we have been discussing
(3) Can you think of any examples where you have expressed emotions when teaching that challenge these unwritten rules?

- What was the situation and how were these unwritten rules challenged?
- How did your students react to this situation?

Emotional labour / management of emotions

We've been considering the situations in which you express or don't express certain emotions, and how and why you do so. We refer to this process as managing your emotions when teaching.

When you express emotions, the students may perceive them.

(1) How is your emotion management process affected by this possibility of students perceiving your emotions?

- What thoughts arise in the process of managing emotions?
- How does managing your own emotions affect you? [e.g. energy levels, mood, well-being,…]
- How does [repeat what people answered to the previous question] affect what you do next?

The students may even emulate these emotions.

(1) How is your emotion management process affected by this possibility of students emulating your emotions?

- What thoughts arise in the process of managing emotions?
- How does managing your own emotions affect you? [e.g. energy levels, mood, well-being,…]
- How does [repeat what people answered to the previous question] affect what you do next?

Background questions 2

Finally, we have a few questions about your background and identities. Remember that you can skip any questions you are not comfortable answering. Having this information helps us understand better the potential connection between your background and identities and how you experience, express and manage your emotions when teaching.

(1) Country where you are located now.

- Do you identify as an immigrant? (Clarification: some interviewees may have acquired citizenship of the country they are currently located in, but still identify as immigrants).

(2) Age range

(a) 18–25
(b) 26–35
(c) 36–45
(d) 46–55
(e) 56–65
(f) 65+

(3) *Are you* comfortable sharing what your gender identity is? If yes, what is it in one or a few words?

- Note to the interviewer in case someone wants clarification what you mean by gender identity: This is the gender you are, which is not necessarily the same as the gender in your legal documents.

(4) *Do you* identify as belonging to some minority/underrepresented group? If yes, which one(s)?

Table A1. Cultural norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
	Strong negative emotions should not be displayed	Growing up in a cultural involves learning what emotions are acceptable to display to which extents. In this cultural context, negative emotions should not be displayed	…you do grow up in a certain culture. I'd imagine that in [other culture] it is natural to show also negative emotions …people don't startle if someone shows strong negative emotions but it is regarded normal there. But it's not like I'm consciously thinking that since I'm [nationality]… I can't show these [negative] emotions. It's more like it's in the background, growing up in a certain culture and getting used to what's considered good and what isn't.
	Positive emotions should be prominently displayed (US)	One should adapt one's emotion display to the culture where one works	If I think about American culture, I feel like you have to show positive emotions in an over-the-top way. Otherwise, people might think you're angry or something. If I were to go there to teach, I'd probably have to practice showing a lot more positive emotions outwardly.
One should focus on the task at work (Finland)	Avoid showing emotions	Finnish work culture is very focussed on the task; emotions are not generally part of the task; so they should not be shown	Finnish work culture is very focused on the task, and emotions are not often highlighted.
One should generally avoid portraying being above others (Sweden)	Avoid showing pride	Conflict between following one's cultural norms and emotion norms (avoid showing pride not to look above others) and teaching-related norms, such as one should be a role model for students (see norm listed below in Academic norms)	Yeah, I, so sometimes I show pride in my own work as well, but very rarely. Both because I think, like, you should use that sparingly. I'm Swedish after all, you know. *laugh* The law of Jante needs to be followed. Actually, I kind of like that one. I don't like people bragging. It's not a good look for anyone. But I, it has its places. Like there are times when, I think it's important from sort of a modelling perspective. Because if you can show that I'm proud of what I've done, then other people are invited to also feel proud of what they've done. [Example in course so students express pride]
Emotions are understood and discussed from neurotypical perspectives	There is a fixed set of language about emotions. The Emotionary (mentioned in the example quote) is a book where the author makes up words for emotions that she doesn't otherwise know how to refer to. This breaks language (cultural) norms and supports individuals who do not identify or experience emotions in a culturally normative way		I read that question [what emotions do you experience in your teaching?] this morning, and I was like, yeah. So, I went and got this book. I should probably, also, note that I'm autistic. And maybe I should have told you this before I agreed to do the interview. So, one of the things that I kind of, struggle with is identifying emotions, and putting into words what those emotions are. [Interviewer: OK] So, I have this book, Emotionary, which is great.

(*Continued*)

Table A1. Continued.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
			So, and this is quite helpful, because this is the kind of, contents page. So, it's got, because I was like, I don't know, what are the emotions that I can have. So, I went through some of these, and thought about, you know, what things were relevant, which was really helpful.

Table A2. Political norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
The government shall not be critized	Avoid showing any emotion that shows opposition to the government	Opposition to the government is to be -severely- punished, so opposition or criticism can only be shown in a covert way	the reason [to risk criticising the regime] was the absurdity of the conditions we were living in. I considered that situation absurd. To starve an entire people for some grandiose ambitions. So there were these constraints, with serious limits on our daily expression, in which we could only use covert, subversive phrasing, well-known among people, to signal our criticism.
Imposing colonizing solutions on Indigenous communities, without their input, is the way to address their needs	Do not express emotions while engaging in (emotionally) violent colonizing acts, such as the imposition of solutions		I was just trying to think, probably the sort of thing, it's sort of showing, I don't know if it's so much emotion, it's more about spaces that are not safe to talk in, when you're talking about some aspects of culture or race or…age. And, you know, I will go there. I'll talk about the fact that, we've been talking about how to be more inclusive in [subject area], for instance. We'll talk about the projects we run with the [Indigenous local] community and the way of having respectful engagement and some form of partnership, rather than simply imposing solutions on

(*Continued*)

Table A2. Continued.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
			people. There's an implicit sort of, the value system probably comes with emotions too. If you like, almost a form of, almost violent emotions where people basically are acting as colonizers, with pretending they're not emotional.
Computing is apolitical: one does not act politically	Any emotion that supports capitalist systems / abuse of power in computing		And a lot of the ways in which we support illegitimate capitalism and abuse of power in the discipline, those are forms of emotion, which are actually hidden forms, but they're embedded in the system. It's interesting to unpack that, but that needs a really deep, critical analysis, I think.
The law is to be followed	Avoid showing anger to certain levels	While showing certain levels of anger may be acceptable, some expressions of anger can break laws, e.g. physical violence towards a student, and diverting from this norm could result in severe consequences	But I think the one at the top of the list would probably be anger. Irrespective of what students do, we need to know how to deal with them in a way that doesn't raise eyebrows or cause legal actions to be taken against you as [an educator].

Table A3. Social identities norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
	Working-class academics experience feelings of a lack of inclusion (socioeconomic class)		I mean also, as an academic with a working-class background, it's also, there are some differences that are hard to put into words. But in talking with some colleagues, we also have that. We also feel like being a bit of a visitor in the academic setting, or like a tourist or intruder, or like, not really being aware of the norms.
The higher the social class, the narrower what is considered proper becomes (socioeconomic class)	Avoid showing some emotions, particularly negative ones		I view it a lot through this kind of social class framework. And perhaps indeed the rules of propriety are stricter the more we are in the middle class or upwards, so what is appropriate is much more limited and possibly also in terms of emotions, especially perhaps with negative emotions, their display.
Dressing appropriately signals belonging to academia (socioeconomic class)	Show excitement in your academic topic.	It was considered outside the norm in computing teaching to talk (with a certain level of excitement) in class about topics not directly connected to the topic at hand or even computing/academia. But it was possible to divert from these norms (both talking off-script and showing excitement) by signalling belonging to academia in other ways, such as having clothes that suggest a certain socioeconomic status.	I'm excited she [educator from another discipline] was [interested and talking] about [non-academic topic during class]. *laugh* And that is, to some extent, that is, like, this is breaking a lot of, a lot of, like *laugh* but of course, that sort of thing would be happening in [different discipline] bachelor's, of course, where else, do you get someone talking totally off-script? And I think in that case, because she was also, she was also very exuberant in her teaching, like, you could see that she cared deeply about [academic topic]. But that was, that was the thing she could do, because while she was doing this, she was also nicely dressed. She looked like an academic. She was clearly in her, at least in her 40s, like she had things going for her to balance up the responsibility and sort of stuff. And the contrast between these things is what made it work so well.

Feminine traits are negatively perceived in computing (gender)	No emotions should be experienced or expressed	Emotions are seen as a feminine trait, and thus unwelcome in a male-dominated environment regardless of the educator's gender	And I think bringing up like the female aspect, I feel like because it [the discipline] is a bit male-dominated, that the female side of things can be looked on as a negative. So, yeah. So emotions, for example. […] I feel like it's a negative thing to have emotions be the reason why you can or can't do something. You know? I don't personally do that. I'm saying that's the norm. Yeah. I think that's the norm.
Men are -always- strong (gender)	Men avoid showing emotions, women are more prone to showing emotions (gender)	Emotions such as sadness and displays of it are considered a sign of weakness, and men are expected to be strong constantly. Thus, no sadness should be displayed.	And, you know, I do not, by any means, I'm not trying to imply that men shouldn't show their emotions, I think that would be great if more men showed their emotions. But certainly, the environment in which I was working, there were a lot of men who were not very emotionally expressive.
Care for the students and the community is disproportionally expected from women as opposed to from men (gender)	Experiencing tiredness and related emotions is expected to be more common among women, as men are not (as) involved in caring (and not as valued) approaches, such as outreach activities		I probably have the impression that I am doing well what I am doing or even if I am burdened or often tired, with too many responsibilities. […] That is, to say, honestly, they take you as a sucker, let her doing it, she has the time, to work, and very well, that there is no need for others, us, to work hard. So situations like this also happen and especially among men, so men, they disappear. I think that in the field of education, they get involved with minimal effort, their courses, possibly the labs, one or two, and that's about it.[…] Maybe it's me, I don't want to discriminate. But yes, I think so. In my department. This is how I see it, that men are less involved. […] So how good you are, there are indicators [..] It's good to have a scholarly productivity indicators regarding publications and participation in conferences. So these indicators, they are automatically the responsibility of each teaching staff. Many only care about meeting their indicators. Others participate actively in all community actions. For example, these days, yesterday, today, and even tomorrow, there is [outreach to schools].

(*Continued*)

Table A3. Continued.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
Men are assigned courses on their expertise and interest; women, the rest (gender)	Experience embarrassment when being less familiar with the content of a course	Prepare well to avoid showing embarrassment	So, I mean, there could be a whole other conversation about gender, and how the men in your department, perhaps, can only teach the things they know about. Whereas, the women in your department often teach the things that are required, regardless of whether they know about it. Before they agreed to teach it, you know. […] So, I thought about when I was prepping a lecture, and I thought that, one of the things I experienced early on, the emotions around that, were a lot of insecurity, you know, do I deserve to be here delivering this thing. And fear of embarrassment. That fear that somebody will ask you a question that you don't know the answer to. […] And I think that drove a lot of my early preparation, right, and I think we've all done this. That, you know, you prep for, like, ten hours, because you think, they might ask this question.
Less is expected from younger teaching staff (age)	Younger teachers have more freedom to display emotions		I mean, in general, because I'm read as so much younger than I am, that means I get a wider breadth of emotions. And it also means that I have less of a reputation to defend.
Being older allows the educator to behave as a caring authority (age)	It is OK to show anger to some extent if it helps the students realise that they did something wrong	Showing anger may not be OK generally but when one is in a power position, given by age (among other factors), anger acts as a way to teach a lesson.	Maybe age because I'm older than them I also act as a big brother to them, maybe I'm justified to be angry when they do something that is not right, I'm also justified to pat their back if they do something good, I would say maybe age.
Immigrant educators are less competent (ethnicity)	Immigrant educators experience insecurity based on a stereotype of them being perceived as 'less than' other educators		[…] you feel like you're not good enough for it, the role you are. So, there is a bit of that insecurity there anyway. And then you are coming with the impression, a certain perception of how people might be perceiving you. So, I think that was there. There was that disparity there because over time, a lot of that, all, almost all of it turns out to be not true, let's say, and you feel people are respecting you as an academic and your perception of what will people think because I am from [country], which is a developing country. They might think that I'm not as qualified as somebody else and I might not get the same respect as other people.

	Certain ethnicities are cheerful more often (ethnicity)	One is expected to show more cheerfulness, such as smiles	Well apparently because I'm [citizenship] I, like, smile more than other people and I'm more like…I don't know if I'd say I'm outgoing but I guess I'm more outgoing than [the local] people because I told them […] So I think maybe I come off more cheerful than I feel more obligated to smile, I guess, in some cultures.
Latinas in the US do not belong in computing (gender and ethnicity)	Latinas show happiness and passion at high levels	If one acts as a Latina is expected to act in terms of emotional display (high levels of happiness, etc.), then one may trigger the stereotype of Latinas not being actual professionals in computing. Thus, the educator regulates their emotion display.	I'm very comfortable expressing my happiness, or my energy, or my passion. But when I am in a setting in which I need to teach students, I feel less comfortable because I feel that that can be an stereotype that they have about me and so I am very self-aware of that. […] the stereotype of a Latina in the United States, which I think it's someone who is very excited and energetic, and who's probably, I don't know, who may be in the professional stereotype is not doing anything in tech. […] [in a faculty meeting] I was talking very energetic about something that I was doing and then another faculty member said something like, 'I really love how your people are always so happy, and excited, and showing those feelings.' And I felt very self-aware and then I was like, yeah, I don't want to show this.

Table A4. Computing norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
Computing is hard to learn / Students are expected to struggle learning	Avoid showing frustration with students who struggle	Even though the educator gets frustrated, this should not be shown because there is an understanding that the subject is hard, the system can be played (passing courses when the students have not acquired the knowledge), and thus this is not on the students (solely).	Especially in programming, it could be frustrating to try to teach someone something like…They should have learned, like, already. And then they have sort of faked that they have learned that and sort of got them by…And then later you need to explain it again several times. And… But there in those situations I really try to avoid actually expressing… expressing any emotions to… Because I know it's hard to program and it's harder to some.
Computing requires innate talent	Avoid showing frustration with students who struggle	Showing frustration would confirm the self-fulfilling prophecy (based on the norm) that one needs innate talent to succeed in computing.	It ruins the whole learning relationship by… Show anger or frustration. Because what I then communicate is that I think that the student is…not good enough. I mean, that's what the student will get. That if I become angry with someone who doesn't understand something… It's like, okay, I'm communicating that you're incapable of understanding. So, that will definitely be a self-fulfilling prophecy.
Computing is separate from emotions	Approach the subjects in an 'academic manner', not experiencing or showing emotions	For technical areas of computing there are no emotions attached. But there may be exceptions for sensitive topics, such as ethics, where one can show, e.g. anger	When you're teaching, like, political science and so on, where you are touching on, like, much more human and sensitive issues and so on, much more delicate topics. Even then, I suppose, being an academic, you should be more academic upon approaching those [topics that may raise emotions], but computing side, you know, it's bits and bytes, it's technical stuff usually. […] ethics, kind of, side of things. Maybe that, kind of, thing where you want to, at least, show that there are some things that you could get, you should be angry about what's happening in the organisation and so on.
Computing is not questionable	No expectation of getting emotional or showing any emotions	Computing is generally a discipline that does not trigger emotional responses. It is about facts and not opinions, there is no expectation that difficult conversations (and the educator's emotional reaction to it) will take place in the classroom. Thus, emotions are generally not expected to be experienced nor shown.	If I am emotional, um, I can't come up with good arguments. […] And I'm not so good with, like, if it's like a higher, like a more sensitive topic […] So, I think there's something a little bit more safe and secure in IT, that makes it so I don't have to have the hard talks [laughs]. It can just stay in that place of me not having to, like, share an opinion that, it's, everything's based off of facts.

Computing is not welcoming to all	Do not show emotions that signal confrontation with your students	The usual way to address inequality is to focus on what women are lacking. When taking another approach, showing emotions that challenge men to raise their awareness, this is faced with resistance. This is experienced as risky by the educator.	[as examples where I have expressed emotion when teaching that challenged unwritten rules] Probably that discussion about men and computing being the problem rather than women and computing. Or the other people who are absent. Because in a way, that's confronting your student body, say they need to lift their game. At least in terms of awareness. I've had some feedback from students, for instance, in that area. One [woman student] sort of commenting in the feedback on the course, saying that while the lecture on diversity was not popular, it was really important for all these misogynistic boys in our class. And this is only three years ago. Then last year, I think, a comment from one student who said, and what are we doing with all this diversity crap, wasting a whole [session] on that when we could be doing something important. So, we're actually fighting against the culture of the discipline and how the students have been brought into that, when we actually challenge those sort of behaviours. That's probably quite a risky space for an academic.

Table A5. Academia and teaching norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
Academia is not a place for emotions	Avoid showing any emotions		Expressing negative emotions verbally or perhaps through gestures is generally not associated with academic work setting.
Teaching staff care for students	Show happiness in the students when they succeed on something	The educator should transmit to the students that they care, and this may be shown by displaying emotions such as happiness in the students' achievements or learning	But then in my daily life I interact with lots of students, and I try to hear them and feel very excited for them. And so for example, when a student tells me, 'Oh, I got the internship that I wanted,' then I would probably just hug them and be super excited with them, which I think it does challenge what the unwritten rules or expectations are. So my joy for them or the things that they accomplish, I try to be personal, which I don't try actually, it's just I am personal.
Educators should not negatively affect students' learning experience	Avoid negative emotions	Educators should not show negative emotions, as the latter would negatively affect the students' learning experience	But I think as a teacher normally we just, you know, just a teacher in general, not necessarily computer science or university teacher, that is something I think is an unwritten rule. You shouldn't bring in the classroom or that, kind of, discourages the whole teaching enterprise, the experience of teaching and learning. If the students are worried about angering you by asking certain questions, for example, or making certain mistakes, then I think there's a problem there. So, that I would imagine is an emotion that you want to keep out of the classroom.
In academic teaching there is little place for humour or some other lighter elements	Show amusement only if the student(s) share the amusement and it does not question the student's competence		I think humor…I think some people think …I would pick out humor elements or kind of more of the lightness …I think if you're being observed, you can't really even do small talk at all, because it would just feel really awkward and, like, strange. So it's, like, hard to say, like, am I, is that a part of being professional or not? …Yeah, but I feel like people are quite judgey. And yeah. So I try to cut out all the personality bits *laugh*
The educator is perfect, knows it all, makes no mistakes	Avoid showing confusion and related emotions		And fear of embarrassment. That fear that somebody will ask you a question that you don't know the answer to. And I think that drove a lot of my early preparation, right, and I think we've all done this. That, you know, you prep for, like, ten hours, because you think, they might ask this question. And then after a few years you go, they've never asked that question, or they never asked any questions. So, yeah, so I think that was probably in there a lot, early on. And I think, as I matured as a [teacher], I kind of, got more to embracing that kind of, confusion, perhaps, that you might have. And to be more, kind of, relaxed about saying, I don't know, I don't know the answer to that question, but it's a really interesting question, let's talk about it.

The educator is organized	Avoid showing negative emotions that signal lack of control over the teaching	Even if one is struggling with being on time or structuring a course, the negative emotions that arise as a result should not be shown to the students, as they would perceive the teaching is chaotic (and their learning negatively affected).	It's really hard to hide who you are. But parts of, for example, having ADHD is really tricky because being on time is really hard. So that's something I try to hide to some extent. I usually tell the students that I find being on time is really hard. And that they can expect me to be on time for the lectures. But I want them to know that if someone is sneaking in quietly five minutes past I start, it's fine. I won't point them out. These kind of things, I try to give example. It's not something I don't have like a 20 minute presentation where I talk about all these things. I kind of try to slip it in, slide it in whenever I see fit. But yeah, so I'm kind of open with those things. But in terms of, so for example, structuring the course is hard. And I think that's hard for most people, but it is really hard. And I start to, I understand now that it's partly hard because I have ADHD. But it's, and that's something I try to hide for the students. To some extent, I talk about how certain things are hard, but I don't want them to feel like the course is a mess. That makes sense. And I think I apparently, I did actually hide that quite well last year because a lot of them said that they was the best organised course they've had at [university name]. So that was a massive success. But everything else in my life was a total mess.
Criticism of tasks is welcome	Avoid showing negative emotions that signal criticism not related to the task	It is OK to show criticism but of the task at hand, not other factors.	Expressing negative emotions verbally or perhaps through gestures is generally not associated with academic work setting. Criticism is indeed expected, but it is usually aimed at addressing the issue at hand.
One should not criticize the institution	Avoid showing frustration, anger, and related emotions towards the institution		Sometimes, I mean, I talk to my TAs about the fact that I find it embarrassing that basically, we give them too much work and don't pay them enough. But criticising the institution, you have to be careful, because it's pretty resistant to that. It talks about being open, but it's not. […] It's policed.
Educators should be receptive of students' emotions and needs	Avoid showing raw/unprocessed/ strong emotions	Showing strong emotions may signal to the students that they need to take care of the educator, which goes against the students' needs.	It's kind of in the job to be, like, able to take in what they want to give you and not for me to be, like, extending my emotions onto them, but to be receptive.
Educators do not care about the students	Educators are not expected to experience compassion nor related emotions towards the students		But I think the main thing was that I had quite a few students saying that, which I think is really sad, but I had quite a few, [students] saying that they'd never had a teacher at [university name] who cared about them.
Educators should focus on students with innate talent	Educators feel indifferent towards students who are not likely to succeed because of perceived lack of innate talent.		[There is an educator] talking about the pure [institution's name], pure engineering students, the ones that the deserving [institution's name] students, they are […] the ones who should get the degree. And then we have about that, I think they say they're […] roughly 10%. And then there are an additional 40-50% who might be good enough to actually become an engineer. And, like, because [institution's name] has to get some additional students to graduate. And then there are another 50% who's just hopeless cases, they should not be here. […] And this teacher sort of directs their teaching very much towards this top 10%. And even though they go through everything, they, they, yeah, they do it in a way where they're like, yeah, they're not very accommodating.

(*Continued*)

Table A5. Continued.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
Students should be independent; not spoiled by teaching staff	Educators do not show empathy	Educators may not experience empathy for struggling students, or they may not successfully transmit it to the students. Then an educator can put extra effort in showing that they care, e.g. through reminders to support struggles with time management	And I try to show them that I care about the lecture. […] But that [reminding students of what happens in the course] was something that several of my colleagues said, I actually should stop doing, because I'm spoiling the students. And I should not, like, that was not a good thing. And I disagree. So then there's some kind of unwritten rule, […] perhaps, what could it be, like, to teach, like, non-struggling students that are, and students who shouldn't be spoiled, and who should become tough and suffer through these courses that I packed. Yeah, I hear a lot of, I find a lot of the discussion that my [organisational unit], at least, is about the […] students have to learn to become independent and structure their plan, their time and so on. […] I strongly believe that some teachers at my department show zero empathy for the students who are struggling and actually don't think they should be at [university name] at all. But I also think that there are teachers who do feel empathy, but I'm not, I'm not as confident that it comes across to the students.
The educator should be a positive role model for the students	Show emotions that students are encouraged to experience and avoid showing emotions that may negatively affect students if imitated	As students may imitate the educator, teaching staff should consider what emotions are a good example to show and which emotion displays should be avoided	But I, it [showing pride] has its places. Like there are times when, I think it's important from sort of a modeling perspective. Because if you can show that I'm proud of what I've done, then other people are invited to also feel proud of what they've done.
Teaching delivery is cold, flat	Avoid showing emotions		Because I mean, initially, it's quite hard to say [which emotions I feel when teaching]. Because I would say that in some ways, teaching computing science, the delivery tends to be quite flat, in a way.
The educator transmits enthusiasm	Show enthusiasm		They [the students] say that, you know, we feel excited about it [the subject] because you are feeling excited about it and you are coming across as enthusiastic. And I've heard from students that they find that it helps them engage with the topic as well, so that some of that rubs off.

Table A6. Affiliation norms.

Non-emotion norm	Example of (related) emotion norm (experience and/or display)	Example of how the norm affects emotion display	Example quote
Students may resit an exam only if a doctor's certificate is provided (institutional policy)	Show care for the student, e.g. by breaking the institutional policy		Sometimes a student can miss a test, and they're supposed to be, because they didn't provide anything, like sick leave, or what. But you listen to the student, you hear their problem, and then sometimes you can just have them resit the test. Even though they didn't provide medical, I mean, on the University policy it says, either for medical reasons, or somebody had died in the family. But sometimes, people have their own social problems that might affect them. So, I think, I am more good, a friendly guy, but I don't think about, I never put in my mind how people think about me.
Course evaluations are not read (organizational unit norm)	Any emotion can be expressed and shown, within certain limits		So, I do have filters [for emotion display], but they're very coarse-grained. *laugh* […] And this thing is not, I'm not super worried about them [the students] being, like, feeling that I'm a cool authority. What are they going to do to me? Like, give me a negative course review, oh, boo-hoo. Nobody reads those anyway. *laugh*
Inappropriate behaviour is not tolerated	Display of strong negative emotions is regarded as inappropriate in a work place	Strong negative emotions should not be displayed	If a teacher were to gain a reputation for consistently berating students and being an intimidating figure, efforts would be made to address this issue, likely through the department head. Feedback indicating that the teacher has angered or frightened students would be taken seriously, and action would be taken at some point to address the situation.