**Emotional Awareness:
On the Importance of Including Emotional Aspects in Education for Sustainable
Development (ESD)**

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ABSTRACT

Pluralistic approaches to ESD that acknowledge complexity, value conflicts, and uncertainty in learning about sustainable development have become popular in recent years. In implementing these, educational researchers have been inspired by deliberative communication models. Deliberative approaches can, however, be criticized for lacking sufficient insight into how emotions influence deliberation and learning. The first aim of this paper is thus to review theories and earlier research, mainly in psychology, that demonstrate the importance of taking emotional aspects seriously in ESD. The second aim is to show that since emotions sometimes can be difficult to bear, it is also important to be aware of emotion regulation strategies in order to promote pluralistic learning. The third aim is to discuss practical implications for ESD, with an emphasis on the importance of allowing articulation of emotional reactions and the need to consider emotion regulation strategies at individual, group, and cultural levels.

Keywords: education for sustainable development, pluralistic approaches, deliberation, emotions, coping

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Introduction

Since the UN Conference in Rio 1992, which emphasized the importance of including young people in the efforts to achieve a sustainable society (UNEP, 1992), education for sustainable development (ESD) has become an important part of the educational systems in many countries. In order to implement environmental education and ESD in schools, pluralistic approachesⁱ of different kinds have become popular among educational researchers in recent years (see for example Heymann and Wals, 2002; Johansson and Læssøe, 2001; Læssøe, 2010; Lotz-Sisitka et al., 2010; Lundegård and Wickman, 2007; Vare and Scott, 2007; Wals, 2007; Wals and Jickling, 2002; Öhman, 2008). What these approaches all have in common is that they acknowledge complexity, respectful dissensus, value conflicts, and uncertainty in the process of learning about sustainable development.

One possible way to put pluralistic approaches into practice was presented by Englund and colleagues who argued that a deliberative communicative model that focuses on rational discussions and argumentation could help in implementing these approaches in schools (Englund et al., 2008). However, deliberative models are not without their critics. One criticism is that most of these models do not take into account emotional aspects in a satisfactory manner and that this neglect could impede the deliberative process and thus also learning (Hoggett and Thompson, 2002; Krause, 2008). A closely related criticism is that rational argumentation needs to be complemented with discussions about concrete personal experiences of a more narrative character in order for all voices to be heard and learning to take place.

Taking into consideration this criticism, the following aims have been formulated for the present paper. (1) The first aim is to review theoretical accounts and earlier research that will illustrate the importance of taking emotional aspects seriously in deliberative approaches to ESD. Two main arguments will be in focus: (a) that emotions are not necessarily irrational, as some deliberative theoreticians claim, but quite the opposite, because research has shown that certain emotions form the basis of some of the most important parts of the deliberative process, namely critical thinking, reflection, and discussion; and (b) that emotions are also vital when it comes to another important part of the deliberative process, namely the ability to listen to and take into consideration other people's viewpoints. (2) The second aim is to show that it is also important to be aware of emotion regulation and coping strategies if one wishes to promote pluralistic learning. This is the case because emotions, for instance caused by competing view-points, can sometimes be difficult to bear and handle, and if people use less optimal strategies to cope with them, important goals of pluralistic learning could be hampered. (3) The third aim is to discuss practical implications for ESD. For instance, the idea of taking emotion regulation into account in deliberative settings is, to the best of the author's knowledge, a new approach in this research tradition. Furthermore, the theoretical approaches and earlier research presented in this study are mainly psychological, which is also rather uncommon in this area of research. Hence, this paper will hopefully add yet

another piece to the puzzle of how a pluralistic approach and similar approaches to ESD can be implemented in schools.

The paper is organized in the following way: In the second section, I describe in more detail some models for implementing a pluralistic approach to ESD through deliberative communication, and conclude that emotions are not sufficiently taken into account in these models. In the third section I describe emotions and their close relation to values from a psychological perspective. The fourth section deals with the significance of anxiety and the ability to handle it for the critical and reflective part of the deliberative process. The fifth section discusses some reasons why anxiety and related emotions can be hard to bear, with a focus on threats to identity-relevant values. In the sixth section, I describe the importance of emotional empathy for understanding other people, but also how empathic reactions can be regulated in different, more or less constructive ways. The seventh and final section concerns practical implications for ESD.

Implementing a pluralistic approach through a deliberative communication model

The transformation of environmental education (EE) into education for sustainable development (ESD) has made the educational situation even more complex, because it involves acknowledging that economic, social, and environmental issues are intertwined (Englund et al., 2008; Öhman, 2008). Learning scientific facts about nature does not suffice to deal with this complexity. To take one example, even if we take human-induced climate change as a scientific fact, we could still disagree on how serious this threat is in relation to other societal problems, we could debate about how most effectively to prevent the worst-case scenarios from happening, or we could argue about who should bear the economic costs of adjustments to climate change. A pluralistic approach to education takes conflicts such as these seriously, and aims to take up and discuss as many perspectives as possible in the educational setting. In this way skills are trained that are important for taking part in a democratic society (Englund et al., 2008; Læssøe, 2010; Wals and Jickling, 2002; Öhman, 2008).

The pluralistic approach to education has, however, been criticized as running the risk of falling into the trap of relativism (Wals, 2010a). Englund and colleagues (2008) argue that this predicament can be overcome in schools by combining a pluralistic approach with a deliberative communication model inspired by models of deliberative democracy. Through a process of rational discussion and argumentation in which everyone involved conforms to certain procedural requirements, the best arguments will gain, if not the approval, at least the acceptance of most participants.

What then are the requirements of deliberative communication? Englund (2006; Englund et al., 2008) states that deliberative communication should be characterized by the following: (1) argumentation where different perspectives and views on the topic of discussion are presented and confronted with one another; and (2) respect for all involved actors, with a

focus on listening to and taking in others' viewpoints. Ideally, these two steps should lead to at least two further things: (3) that the involved persons reach some kind of agreement, albeit temporary, concerning the issue discussed, or at least come to better understand each others' perspectives, because in a truly pluralistic society more than one coherent and well-grounded solution to a problem can exist (see Krause, 2008, p. 171); and (4) that taken-for-granted habits and traditions are questioned and challenged. The task for the educator is, thus, to create conditions that allow these requirements to be realized in practice. If this is successful, it is argued, many of the democratic goals of public education will be fulfilled and learning will occur.

This description of a deliberative communication model of ESD resembles a more well-known theory in this area of research, namely how Wals describes social learning in ESD (Wals, 2007; Wals, 2011). In Wals' account, the social learning approach is a transformative kind of learning in which a communicative process is supposed to enable one to critically examine one's own values, habits, and norms (deconstruction), listen to what others have to say (confrontation), and construct new viewpoints about the issues at hand (reconstruction). Thus, challenging learners with alternative ways of interpreting their experiences is an important part of these educational models (Johansson and Læssøe, 2008; Wals, 2010b)

Deliberative models have, however, been criticized from many different angles (see for example Joas, 2000, pp.161–186; Öhman and Öhman, 2013). One rather common criticism, that is of specific interest for this paper, is that these models in most cases lack sufficient insight into how emotions are inherent in, and influence the deliberative process (Hoggett and Thompson, 2002; Krause, 2008). In traditional theories of deliberation, emotions are seen as irrational forces that are not subject to reasoned inspection and therefore disrupt the deliberative process. In the context of ESD, Englund and colleagues (2008) have pointed out that emotional reactions, or moral reactions, are common in deliberations about sustainability issues in the classroom. These emotional reactions appear spontaneously among the pupils and are therefore seen as non-intentional and far-removed from cognition (p. 44; see also Öhman, 2008 and Öhman and Östman, 2008). This emphasis on the irrationality of emotion has, however, been challenged by researchers and theoreticians who argue and show that emotions are closely related to values and that some emotions are actually the forces that motivate us to take part in deliberative processes in the first place. In the following section I will present how emotions are conceptualized, mainly in the field of psychology. The rational side of emotions will be in focus.

What is an emotion?

Most emotion researchers agree that emotions consist of many different components, of which the subjectively felt feeling is just one part. One common definition is that emotions are reactions to important events in the external or internal environment, often of a social character, involving a number of sub-components such as appraisals, physiological reactions, subjective feelings, expressive behaviour, and action tendencies (Juslin, 2011). The terms

'important events' and 'appraisals' indicate that an evaluative dimension is present, and thus emotions seem to reveal preferences, informing the person whether the current situation is in accordance with a valued state (positive emotions) or is a mismatch (negative emotions). It is, however, important to realize that the individual is not always conscious of these evaluations.

Here, a connection can be made between emotions and the brain's primary motivational and defence systems. A defensive emotional or motivational system called the behavioural inhibition system, BIS, and an appetitive system known as the behavioural activation system, BAS. Most theorists claim that BIS is involved in the detection of threats and the activation of negative emotions, especially the feeling of anxiety, while BAS is responsible for exploration and the activation of positive emotions (Gray and McNaughton, 2000; Harmon-Jones, 2003). BIS and BAS are said to process much more information, both from the outer and inner world, than we are consciously aware of. BIS makes us ready for surprising and problematic aspects in the outside world and calls for mental or behavioural adjustment, whereas BAS is related to positive emotions that serve as a cue to stay the course and continue to rely on habits (Cacioppo et al., 1999; Clore, 2011). Thus, the main task of BIS is to detect threats to goals and, through the emotion of anxiety, call the cognitive system into action to decide which action is best to get rid of the threat. In humans, these threats to goals can be very complex and are based on learning, cognition and culture (Cacioppo, 2002).

In this regard, a connection between emotions and values can be discerned. Appraisal theories claim that emotions are not only simple reflexive responses to a stimulus, since the same objective stimulus can create quite different emotional reactions depending on people's unique way of making meaning of reality (Lazarus, 1991; Smith and Lazarus, 1990). Emotions are seen as relational, as they focus on the implications of a situation for a person in light of this person's needs, hopes, goals, values, and abilities (Smith and Kirby, 2009).

According to appraisal theorists, there are two main functions of emotions (Batson et al., 1992). The first is to provide information about the actor's relation to important goals. By scrutinizing our emotional reactions we can find out more about our goals and values. The second is to provide energy to act via the physical arousal that is connected with emotions. Smith and Kirby (2000) propose that there are several forms of appraisal processes that can occur simultaneously and that involve different modes of cognitive processing. Associative processing involves the priming and activation of memories and can be set in motion quickly and automatically, while reasoning, which is executed at a conscious level, involves slower, more controllable, and flexible thinking. New emotion-eliciting situations can, through interpretation and re-interpretation, become stored in memory and become available for later quick associative processing. That is, emotional conceptualizations of different phenomena may be acquired in an elaborative and thorough fashion, but once obtained can be applied in a rapid manner (Turiel, 2006, see also Roeser, 2010b).

To summarize, what has been described above has implications for emotional reactions in the classroom. Just because a pupil reacts emotionally in a spontaneous way, for instance

when deliberating about sustainability issues, does not mean that these emotions are non-intentional in a deeper sense. They can be based on well-deliberated values, either at a personal or a cultural level, which have been stored in memory and now are being re-actualized in a specific situation, values that can be important to articulate and to discuss in the educational setting. I will return to the relation between values and emotions later in this paper, but first I will turn to the significance of anxiety for deliberation, which can be deduced from the theories about BIS and BAS described above.

The importance of anxiety for deliberation

In this section, I will return to the requirements of deliberative communication that were presented by Englund and colleagues (Englund, 2006; Englund et al., 2008) and show how these are related to emotional aspects. I start with the demand that different and sometimes clashing viewpoints should be acknowledged and pondered over in the deliberative process in order to challenge taken-for-granted habits and to enable learning to take place (see also Wals, 2007). Here, there is no mention of emotions. Pacifici and Garrison (2004, p. 122), however, acknowledge that the clash between old habits and new information in a learning situation often leads to feelings of tension. According to them, it is both the cognitive doubt created in the situation and the emotions of unease or tension that motivate inquiry and reflection. In the context of ESD, Wals (2007, 2011) has also pointed out the importance of feelings of dissonance for learning.

This way of thinking accords with the theories of BIS and BAS described above (Clore, 2011; Gray, 1990; Gray and McNaughton, 2000; Marcus, 2002; Marcus; Neuman and MacKuen, 2000). When a problematic situation appears, i.e. when our habits are not enough to solve a problem, BIS, the behavioural inhibition system, notices it faster than we do consciously. Thus, the BIS is activated, triggering anxiety-related emotions which cause us to stop what we are doing for the moment, getting us aroused with a heightened attention to outer stimuli, and increasing our information processing capability. In accordance with this theory, many recent empirical studies, mostly in a political context, have identified emotions of anxiety and worry as a necessary precondition for deliberation and critical thinking (Brader, 2006; Marcus, 2002; Marcus et al., 2000; Marcus et al., 2011; Marcus et al., 2005; Valentino et al., 2008; Wolak et al., 2003). Hence, anxiety seems to activate the cognitive system and make people both more reflective and more focused toward the outside world. Without these emotions we would not be motivated to think critically and to deliberate (Marcus, 2002).

Hence, recent research, mostly in political psychology, has shown that emotions of worry and anxiety are not the antithesis of deliberation, but instead are the forces that make us reflective and motivate us to take part in deliberative processes and question our habits. However, we need to acknowledge these negative feeling, otherwise deliberation will not take place. According to psychoanalytical theories, we cannot sustain doubt, uncertainty, and open-mindedness without a capacity to tolerate anxiety (Hogett and Thompson, 2001). The

question is therefore whether we always tolerate anxietyⁱⁱ. Thearle and Weinreich-Haste (1986) have pointed out and empirically demonstrated that anxiety in relation to societal threats, in their case the threat of nuclear war, can be hard to face and is dealt with by means of coping strategies that can be more or less constructive from the perspective of deliberation.

Values and emotions

One reason why the anxiety evoked by new information in deliberative settings can be hard to handle is, ironically, because this information threatens important world-views and values that people embrace. If we take climate change as an example, several studies show that de-emphasizing the seriousness of this problem is not primarily a question of a lack of knowledge, or misunderstanding of scientific facts, but is instead related to specific world views that some people embrace such as conservatism, preferring a free market ideology, and a belief in a just world, world views which are threatened by information about climate change (Feinberg and Willer, 2011; Kahan et al., 2012; McCright and Dunlap, 2011). For example, Feinberg and Willer (2011) show that when a person who embraces a just-world belief is confronted with dire messages about injustices related to climate change, instead of acknowledging the anxiety aroused, the person de-emphasizes the seriousness of climate change. If emotion regulation strategies like these are used to defend one's world views, it does not matter how many scientific facts and valid arguments are presented, they will still not be taken seriously.

But how then can we explain that some who feel that their values are threatened by climate change and other global problems, actually become more concerned and active in relation to the problem by dire messages and thus do not seem to deny the climate threat just because they feel worry (see Ojala, 2007), while others react in the opposite way? These differences could perhaps be explained by the fact that for people who strongly embrace other-oriented values, such as universal or biospheric values, the existence of climate change does not threaten the foundation of their values, and therefore does not concern their *self-identities* or *social identities*; instead the threat pertains to the actualization of these values in reality. Therefore, it is often important for these people to search for information and do something to solve the problem so that, for instance, their desire for more global justice in the long run can be fulfilled. In addition, this gives such people an opportunity to perceive themselves as “good” and morally high-standing persons.

For people with more individualistic and conservative world views, the existence of climate change to a greater extent threatens values that are close to their *self-identity* or *social identity* (see for example Kahan et al., 2012). The discourse about climate change signals that these values and world views are mistaken and/or even morally reprehensible because they have caused climate change in the first place. Thus, in a sense these people become “bad” persons. Furthermore, if the climate change discourse claims that to survive we must drastically change society and our lifestyles, this could threaten some groups' entire way of life and make them less inclined to be environmentally active (see Murtagh et al., 2012).

Thus, it is more difficult for these people to take in information about climate change (see also Kahan et al. 2012).

It is, however, important to realize that when it comes to judging a problem such as climate change, values and coping mechanisms are at play for all people, even those with strong pro-environmental values. According to the theory of cognitive dissonance, as human beings we strive for consistency between our values/world-views and our actions (Festinger, 1957). If we perceive a gap between them – for instance, that we are not acting in accordance with our environmental values – a feeling of cognitive dissonance will appear. This feeling could motivate us to change our way of acting, as Wals (2011) has pointed out in the context of ESD. However, it is more common for us either to change our attitudes toward the behaviour or to use less constructive coping strategies to handle these feelings such as black-and-white thinking and distancing (Festinger, 1957; see also Ojala and Rikner, 2010, Ojala, 2012c). To sum up, the emotions that are evoked when significant values are challenged may be handled with less constructive coping strategies because the person feels accused of being a bad person or that his or her way of life is threatened, as well as because it is more convenient to change your attitudes than to change your actions.

Perspective taking, emotions, and deliberation

In this section, I will return to the need for skills in understanding and being able to listen to others in deliberative processes (see Englund et al., 2008). According to Nussbaum (2002) it is not enough to be able to take the viewpoints of others concretely present in a learning situation; if we are to develop skills that are vital to solving global problems, we also need to understand the situations of people living in other parts of the world and perhaps also be able to imagine how future generations will be affected by a problem such as climate change (see also Wals, 2010a). Here, the cognitive dimension is not the only one that counts; in psychological research, perspective taking and emotions such as empathic concern and sympathy are seen as intertwined and equally important parts of moral development.

Empathy is often perceived as consisting of two abilities: to cognitively adopt another person's perspective and to become emotionally aroused by this situation (Davis, 1983; Hoffman, 2000). The emotional aspect of empathy is one of the first moral reactions that can be observed in human life; it begins so early in life and has been identified in so many different cultures, that it is now seen as a biologically innate characteristic of humans (Damon, 1996). The basis for these reactions seems to be the existence of “mirror neurons” that enable us to understand others, not through conscious thought, but through emotions (de Waal, 2008). It is this ability to be affected by others' emotional states that motivates a child to care about others (Damon, 1996; Strayer and Shroder, 1989). Thus, to really care about other people's well-being, it is not enough merely to be able to adopt their points of view; one must also be emotionally touched by them.

It is far from certain, however, that empathy will lead to helping behaviour. Eisenberg (2000) makes a distinction between feelings of empathy, which are about sharing another person's feeling of distress, and sympathy, which means to be concerned about that person's well-being. Sympathy could be said to occur when the raw emotion of empathy is combined with a cognitive assessment of the other's situation and efforts to understand the cause of the other's emotions (de Waal, 2008). It is sympathy that motivates pro-social actions, and not necessarily empathic responses. In order to be able to feel sympathy it is believed that the child needs to be taught how to regulate his or her empathic responses in an optimal way (Eisenberg, 2000). If this learning does not take place, sharing another person's feeling could lead to self-focused worry, or empathic distress (see Davis, 1983), instead of other-oriented feelings. These feelings of self-focused worry could in turn lead to defensive reactions or to the person withdrawing from the situation instead of helping the other in need (see also Bengtsson, 2003). If, on the other hand, the child has the opportunity to learn how to optimally regulate the empathic reactions, sympathy (see Eisenberg, 2000), or empathic concern (Davis, 1983) will be evoked, and this feeling helps the child to understand and help the person in need.

Hence, emotion regulation is an important part of moral development in a proximal context, but is it also important when it comes to perspective taking with regard to societal issues? There is a study showing that when privileged American high-school students participated in a course on social justice, in which they learned about various disadvantaged groups, they were less inclined to care about these matters after the course than a control group that did not take part in the course (Seider, 2008). The explanation of this seemingly paradoxical result was that many of the young people who took part in the course experienced strong self-focused worry and fear about the possibility of becoming poor or homeless themselves in the future. Thus, the emotions evoked by taking the perspective of homeless persons were not regulated in a way that increased pro-social action, but led instead to inaction.

To summarize, it might be the case that people learning about issues related to sustainable development can react differently to dire messages because they differ in terms of general skills to regulate emotions evoked by taking the perspectives of others. Hence, in order for deliberative processes to work one has to take not only emotions into account, but also different ways of regulating emotions.

Practical implications for ESD

In this part of the paper, practical implications for ESD will be described. To sum up the arguments presented above, it is vital to take emotions into account because they can be closely related to values that are not always fully conscious and articulated, values that could be very important to include in deliberative communication, both in critical discussions and also in a more narrative way. Furthermore, emotions are motivational forces that make us eager to deliberate in the first place. The ability to harbour negative emotions is the basis for

both the argumentative and critical part of deliberation, as well as the perspective-taking part of the deliberative process. However, since negative emotions can be difficult to face and to bear, many people cope with them by using less constructive emotion regulation strategies. Thus, if educators would like to implement a pluralistic approach to ESD, emotional awareness is vital. In the following sections I will once again return to the requirements of deliberative communication as presented by Englund and colleagues (Englund, 2006; Englund et al., 2008) and show how educators can work with emotional aspects in order to better be able to live up to these requirements.

The first requirement is that different values and perspectives should be discussed and tested against each other in the classroom. This includes argumentation and rational reasoning on issues that one feels strongly about. In this regard, theorists claim that in order for all views and values to be included in deliberative processes, educators must take account of emotions, since groups with less power in society (for instance pupils in relation to teachers) can lack the right words to articulate their views and values in a way that is taken seriously, because the rules of the communicative process are created by those with power (Lutz, 1996; Scheman, 1996). In order to achieve some form of moral objectivity, we must take seriously emotions of, for instance, anxiety and anger, and interpret them as important communicative messengers that should be lifted to the surface and discussed so that they can be transformed into criticism and change. Hence, it could be argued that, as a first step in including emotional aspects in deliberative approaches to ESD, it is important to give young people the opportunity to articulate their emotional reactions (Ojala, 2007; see also Englund et al., 2008 and Kagawa and Selby, 2012). In this way, important value-oriented questions could be brought to the surface.

In order to distinguish moral or pro-social emotions from less constructive emotions and from moods, Nussbaum (2001) argues that when emotions are articulated they should be critically examined. For instance, she, in accordance with the appraisal theories described above, claims that because emotions to a certain extent include beliefs and evaluations, they could be more or less right in a specific context. If I am angry at someone, when I think about this feeling I may realize that this emotion is caused by an appraisal that a friend of mine has been treated unjustly by this person. Thus, as a second step, appraisals related to emotions can be discussed and pondered about in the learning process, and here one can find out if the feeling is truly moral, based on real injustices, or is merely based on a mistaken interpretation. To ask a student who has just expressed an emotion or moral reaction in the classroom to try to put words to his or her feelings and then discuss that judgment, is thus an important part of enriching the deliberative processⁱⁱⁱ.

The process described above has, however, been criticized for equating emotions and cognition (see Krause, 2008 and Roeser, 2010a). Roeser (2010a) argues that instead of just using thinking/cognition/discussion to scrutinize emotions, other emotions should be used to critically investigate emotional reactions in deliberative processes. This can be seen as a third step in the process to include emotions in deliberative approaches to ESD. By encouraging

empathy not only with others present in the deliberative process but also future generations or people living in distant places, we can use altruistic emotions to help us discern egoistic emotions in a better way than pure cognition can. Here it is important that educators work with concrete cases, because generalized accounts of such things as starvation will instead decrease empathic reactions, while working with cases about concrete people has the opposite effect (see Slovic, 2007). In this regard, Nussbaum (2002) has pointed out the importance of using art and literature to enlarge the empathic sphere and to be able to live up to the requirement of listening and taking into account others' viewpoints in the deliberative communicative model.

If educators apply the three steps described above, the students will hopefully be on their way toward fulfilling two other requirements of the deliberative communicative model, namely, understanding that more than one coherent and well-grounded solution to a problem can exist and being able to challenge taken-for-granted habits (Englund, 2006; Englund et al., 2008). However, we also need to take into account different kinds of coping strategies that can serve as obstacles to fulfilling these requirements.

Research has shown that one way to cope with the threat of global climate change is to use emotion-focused coping (Ojala, 2012b, 2012c, 2013). This comprises strategies such as de-emphasizing the threat by claiming that it is exaggerated or even that it is something positive because the summers will become warmer in the Nordic part of the world. Distancing oneself from negative emotions, for instance, by thinking about something else than climate change, is another emotion-focused strategy.

Perhaps not surprisingly, de-emphasizing the threat seems to be related to a low degree of environmental engagement and to low environmental-efficacy (Ojala, 2012b, 2013). Furthermore studies show that these denial-like strategies make people less receptive to information about climate change (Feinberg and Willer, 2010). Thus, these strategies are not beneficial from the perspective of a deliberative communication approach.

How then can educators counteract their negative impact? Fortunately, studies have shown that there are also other more constructive ways that people cope with global climate change (Ojala, 2012b, 2012c, 2013). Many young people use a problem-focused approach whereby one thinks about and searches for information about what laypeople can do about climate change, or actually does something concrete such as helping one's parents to save energy. A third way to cope is a meaning-focused approach whereby one, for example, places trust in different societal actors such as scientists and politicians. Young people also use positive reappraisal where they try to reframe the problem and focus on positive trends, for instance, that climate change is more widely recognized today than earlier. Meaning-focused coping has been found to be more related to the activation of positive emotions such as hope than to the reduction of negative emotions (Folkman, 2009).

Studies have found that meaning-focused coping and constructive hope/optimism can buffer anxiety and prevent it from leading to low well-being (Ojala, 2005, 2012b) and also seem to be related to pro-environmental engagement (Ojala, 2008, 2012a, 2013). Encouraging hope and trust, and helping the young to engage in a kind of dialectic thinking in which one can simultaneously take in both problems (worry) and progress (hope) in relation to climate change, are thus important areas for educators to focus on (see Ojala, 2007). When it comes to positive reappraisal, educators can learn from psychological research about ways to promote flexible thinking and hope at a micro-level (see for instance Cunningham et al., 2002; Gillham and Reivich, 2004). Here, educators can encourage students to evaluate their own self-talk; if their view of the global future is very pessimistic, ask them if that is the only way to think about it. It is important to help them generate alternative interpretations and challenge ways of thinking that are characterized by denial or catastrophic expectations. Are there any positive trends to focus on? How has humanity solved great and seemingly intractable problems historically?

Educators can also help students when it comes to having trust in different societal actors. Uncritical and naïve trust should not be encouraged; however, it is important to try to avoid extreme cynicism concerning, for example, politicians and scientists, since this can lead to feelings of helplessness (Colby et al., 2007, p. 153). One strategy could be to invite into the classroom societal actors who have worked for a long time with issues related to sustainable development and who have shown persistence in the face of challenges (Colby et al., 2007, p. 154).

In order to promote problem-focused coping among students who are not able to cope in this way on their own, it is vital to set realistic sub-goals for one's engagement, and to pinpoint and discuss pathways, i.e. different individual and collective actions that are effective in trying to reach the sub-goals (see Snyder, 2000). It is also vital to encourage a feeling of agency – that everyone's effort is worth something – and to help students to take satisfaction in small successes. Negative emotions can be turned into something constructive if one feels there is at least something one can do, i.e., if one feels that one has some control over the problem (MacGregor, 1991). Collective rather than individual actions can also promote hope (Ojala, 2007, 2012c).

In addition, in order to avoid different defensive coping strategies it is important to create a culture that allows everyone to express different emotions and be aware of tendencies to devalue or make fun of these reactions. It is also crucial to make it clear that it is people's opinions that are being scrutinized not they as persons. Finally, cognitive dissonance and ambivalence can be handled in different ways, and educators can try to challenge tendencies toward black-and-white thinking by presenting alternative and more constructive ways of coping that research has identified (see Ojala, 2008; Ojala and Rikner, 2012). For instance, one need not believe that just because not everyone in the world is environmentally engaged, it is meaningless to do anything oneself. Instead some people express ideas like they at least can serve as role models for others, or someone has to take the first step, or it is a moral duty

to behave in certain way regardless of what others do. Strategies like these can be compared and discussed critically in the classroom (see Ojala and Rikner, 2010).

The studies described above can, however, be criticized for an over-emphasis on the individual. Coping is not something that takes place in isolation; it also concerns how people interact and talk with others about negative emotions and stressful events (Folkman, 2009). This has been indicated above only indirectly, and what these interactive processes look like in practice has not been investigated. Thus, there is a need for further research examining emotion regulation strategies and coping at different levels. The personal level takes into consideration that young people bring certain general ways of coping with negative emotions, learned, for instance, from their parents, into the classroom situation. The person also faces emotional rules for how to express emotions in that specific situation and group. Finally, the people interacting are also influenced by broader cultural norms concerning how, for instance, men and women should or should not express emotions. Thus, in order to promote a pluralistic approach to ESD it is necessary to consider emotion regulation strategies at individual, group, and cultural levels.

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ⁱ In this paper I will use the word “pluralistic” (see Öhman 2008) to refer to all of these educational approaches. However, in reality different researchers use different terms such as “ESD2” (Vare and Scott, 2007) or “dialogical deconstruction” (Heymann and Wals, 2002).

ⁱⁱ See also Johansson and Laessö (2008); and Wals (2007, 2011) and his claim that it is important for the educator to be aware of people’s individual comfort zone for dissonance.

ⁱⁱⁱ If this gets too personal educators can at least in a general way point out to the class the close relation between cognition and emotions, and that it could be beneficial for oneself to think about these issues at a private level when experiencing a strong emotion. Thus, education about emotions should be a part of ESD.