Dealing with Emotions

A Pedagogical Challenge to Innovative Learning

Birthe Lund and Tatiana Chemi (Eds.)

Dealing with Emotions

Creative Education Book Series

Volume 3

Series Editors
Michael A. Peters & Tina Besley
University of Waikato, New Zealand

The knowledge, learning and creative economies manifest the changing significance of intellectual capital and the thickening connections between economic growth, knowledge and creativity. Increasingly economic and social activity is comprised by the 'symbolic' or 'weightless' economy with its iconic, immaterial and digital goods. This new digital knowledge economy includes new international labor that rely on developments in information and communication technologies (ICTs) that are changing the format, density and nature of the exchange and flows of knowledge, research and scholarship. Delivery modes in education are being reshaped. New global cultures of knowledge and research networks are spreading rapidly. New forms of openness and networking, cross-border people movement, flows of capital, portal cities and intensive development zones all are changing the conditions of imagining and producing and the sharing of creative work in different spheres. At the centre of is the economy/ creativity nexus. But are education systems, institutions, assumptions and habits positioned and able so as to seize the opportunities and meet the challenges? This new series investigates all the aspects of education in (and as) the creative economy in order to extend the dialogue about the relationship between contemporary higher education and the changing face of contemporary economies.

Editorial Board

Daniel Araya, University of Illinois, USA
Ronald Barnett, London Institute of Education, UK

Dealing with Emotions

A Pedagogical Challenge to Innovative Learning

Edited by

Birthe Lund
Aalborg University, Aalborg, Denmark

and

Tatiana Chemi
Aalborg University, Aalborg, Denmark

TABLE OF CONTENTS

BIRTHE LUND AND TATIANA CHEMI

INTRODUCTION

We have been schooled for years to stress only the cognitive, to avoid any feeling connected with learning. We have been denying a most important part of ourselves (…). The excitement has, in large measure, gone out of education – even though no one can take excitement out of real learning.

<div align="right">Carl Rogers</div>

EMOTIONS NEGLECTED

In educational contexts, the study of emotions has often, until recently, been neglected. This lack of interest has characterised several domains of knowledge, including the educational one, which is the main topic of the present anthology. The general neglect of emotions in education is regrettable and can have dramatic consequences, to such an extent that it can become a socio-political issue. Education implies the creation and development of human beings. This formation of human beings (*Bildung*) is a process that is challenging and involves a number of phenomena. Among the elements of the learning process, and perhaps among the most influential for learning processes, are the students' and educators' values and emotions. It is consequently vital to acknowledge emotions in education and educational changes in order to create innovative learning.

Learning and development are essential to optimal human functioning and learning experiences can either stimulate or discourage this bio-psychological universal need. As anthropology and evolutionary biology maintain, humans need learning to thrive (Dissanayake, 1995, 2000). The very survival of our species depends on how appropriately we respond to challenges and learn from stimuli and from each other. Cultural phenomena such as sociality, creativity, learning and emotional responses might be grounded on biological needs and vice versa. Even though the capacity of learning and developing appropriately in response to context-related demands is fundamental, education has lingered behind in including the emotional side of learning among its considerations. The present contribution aims to address specific examples in which emotions are impossible to ignore in education. What happens when students and teachers are extraordinarily engaged and open to learning? In which situations do learners feel they learn best? Which emotional elements characterise learning environments where students work with creativity, art, humour, happiness and engagement? How does it feel to become a student? Which emotions

are involved in the classroom and how do teachers react to them? These questions were, among others, our scientific starting point, in order to address the need of more specific knowledge about the role of emotions in education.

EMOTIONS IN EDUCATION

As educators and researchers in education we are aware of the inconsistency of pedagogy and pedagogical models that do not assimilate recent knowledge on learning processes, in order to inspire new ways to look at education and new practices. One example of this is the under-emphasis of the collaborative functioning of learning and creating that often takes place in educational programmes, even though both theories and empirical evidence strongly accentuate the relational aspect of learning and creativity. Obsolete pedagogical thinking seems to be based on the constant repression of emotions, resulting in individuals spending a large amount of energy in order to control or ignore emotions. Exceptions are artistic practices and art education, where individuals are allowed and even expected to use and express emotions, even on the verge of being eccentric or silly. Of course this commonplace does not do justice either to education or to the arts, the former comprising more than cognitive transaction of knowledge and the latter being more than "just" uncontrolled expression of feelings. On the other side of the educational spectrum, pedagogies, such as progressive education, constructivism and socio-cultural perspectives seem to describe learning as an organic process, where emotions are taken into account rather than controlled, but still reflected upon and regulated.

The latter perspective is at the moment confirmed by both humanistic and medical sciences, which find growing evidence of the background role of emotion in learning processes. Education thereby faces several dilemmas: how to integrate the emotional aspects of learning and teaching in education? What is the specific role of affects in education? In which ways do emotions influence teaching and learning? How does the educator's role in the classroom change? How can educators design learning environments that respect the role of emotions and make use of emotions' potential to inspire learning? These questions have been a fundamental inspiration for the writers' team, not only in order to complete the present chapters.

STUDIES ON EMOTIONS

To start our journey through the presented cases, we wish to give a short overview of existing perspectives on emotions and learning. Rather than being a comprehensive review of this field, the following is an outline of the tradition into which we write our contribution, outline here necessary in order to introduce our studies and cases.

The current attention that several fields of studies pay to emotions has partly done justice to this often-neglected theme. The flourishing of studies on emotions and their application to several contexts (leadership, education, psychology, therapy,

science and so on) is quite new (for a supplementary overview see Damasio, 1999). Contemporary experts, such as Damasio (1999) or Davidson (2012), reported hardship and resistance to their early interests on emotions in the Seventies (Davidson, 2012, p. xviii). Pioneering in this field sounds, in their retrospective accounts, a hard and lonely enterprise, as only few contributions made up the theoretical background for general studies on emotions.

Philosophers have reflected in various ways about affects, volition, perception and their bodily-physiological or aesthetic-artistic expression: "most of the great classical philosophers – Plato, Aristotle, Spinoza, Descartes, Hobbes, Hume – had recognizable theories of emotion, conceived as responses to certain sorts of events of concern to a subject, triggering bodily changes and typically motivating characteristic behavior" (de Sousa, 2014). Cultural influences, though, seem to determine the fortunes or misfortunes of studies on emotion. For instance, Romanticism greatly emphasised the role of emotions over reason, by radicalising Kant's (1724–1804) concept of *Gefühl* (1914, I, I, 3), the subjective emotional capacity as autonomous capability for knowing. Even though Romantic philosophers and artists looked at feeling as capable of critical analysis, equal to intellect and reason, they kept it separate from intellect, ultimately perpetrating "Descartes' error" (Damasio, 1994) of separation between reason and "passion", as Descartes (1596–1650) called affects in his essay *Les passions de l'âme* (in English, 1989). Affects as strategies of knowing were necessarily present in philosophers that reflect on aesthetics, which is the science of sensory awareness. Pascal (1623–1662) and Baumgarten (1714–1762) conceptualised the independent value of sensory and emotional judgment, opening to the way for the phenomenologists' fundamental contribution. Phenomenologists' attention to the subject and to phenomena made emotions and feelings central displays of subjective reactions or expressions. The scholarly consequence was a wider and more specific interest in emotions.

Nevertheless, the twentieth century stood out for its surprising neglect of emotions (de Sousa, 2014), especially where one might have most expected, such as in the sciences of as psychology and physiology. According to Damasio (1999), "Romantics placed emotion in the body and reason in the brain. Twentieth-century science left out the body, moved emotion back into the brain, but relegated it to the lower neural strata" (p. 39). This century proceeded as if the previous century's few but fundamental theories on emotions did not exist. Damasio (1999) pointed to two theories as fundamental to the most recent findings on mind, brain and emotions: Darwin's evolutionary theory and theory of emotions and Freud's psychoanalysis. The former being a report of the expression of emotion in humans and animals, embracing different cultures and species, the latter looking specifically at the dark side of emotions and its pathologies.

On the humanistic and pragmatic side of psychology and philosophy, we find fundamental reflections that have anticipated bio-physiological and neuroscientific studies. These theories are worth focussing on, as they include social as well as cultural aspects of learning, as the scientific background for the present anthology.

In 1884, William James published in the journal *Mind* the essay "What is an Emotion?" (now in James, 2012). Here he took a new perspective on the process that generated emotions and thoughts. At the same time, in Denmark, psychologist Carl G. Lange (1834–1900) came to the same conclusions. Indeed, this theory on emotions is today known as the James-Lange theory. James addressed the opposition brain-emotion proposing an organic interpretation, where "the emotional brain-processes not only resemble the ordinary sensorial brain-processes, but in very truth *are* nothing but such processes variously combined" (James, 2012, p. 2, emphasis in text). The old view maintained that emotions arose from mental perception and that bodily expressions resulted as a consequence of feeling emotion. In other words, the sight of a dangerous animal would produce the emotion of fear and as a consequence an individual's body would react by raised pulse, changes in viscera and other humours (sweat, tears) and so on. James, with great insight, maintained that it was the other way around: "*my thesis on the contrary is that the bodily changes follow directly the* PERCEPTION *of the exciting fact, and that our feeling of the same changes as they occur* IS *the emotion*" (James, 2012, p. 4, capitals and emphasis in text). In other words, we feel sad because we cry, rather than cry because we feel sad. This statement, later confirmed and specified by neurosciences (Damasio, 1999), literally turned upside-down the current (at the time and partly still today) common view of emotions. The immediate consequences were a corollary of new concepts. Firstly, the brain was embodied and not purely cognitive. Secondly, "a purely disembodied human emotion" became "a nonsensity" (James, 2012, p. 8). A number of dilemmas on emotions were disclosed: emotions could be both effect and manifestation of affective states, voluntary arousal of emotional manifestations might produce the emotion in itself, some emotions seemed to be cross-cultural or universal, the arts had a special role in providing evidence to the theory. Finally, a direct application was imagined in education: the possibility of cultivating desirable dispositions and opposing the undesirable ones.

Dewey (1859–1952) followed William James in his belief that knowledge and learning arise "from reflection upon our actions and that the worth of a putative item of knowledge is directly correlated with the problem-solving success of the actions performed under its guidance. Thus Dewey, sharply disagreeing with Plato, regarded knowing as an active rather than a passive affair—a strong theme in his writings is his opposition to what is sometimes called 'the spectator theory of knowledge'" (Phillips & Siegel, 2013). Even though Dewey does not always address emotions specifically, all his philosophical work is about the experiential, aesthetic, spiritual and democratic dimensions of emotions. Moreover, Dewey subscribes to the pragmatic and holistic conception of education, where emotions are essential to learning.

Last but not least, we wish to mention a theorist who, in a similar way to Dewey and Williams, has originally contributed to discussing the role of affects in learning and

has been a great inspiration for some contributions in the present book: humanistic psychologist Carl Rogers (1902–1987). In his volume *A Way of Being*, first published in 1980, he devoted a chapter to the educational dilemma "Can Learning Encompass both Ideas and Feelings?" (1995, pp. 263–291). He followed Dewey and Williams in emphasising "the value of combining experiential with cognitive learning" (p. 263) and sharply criticised the established educational system that perpetuates the separation experience/cognition: "I deplore the manner in which, from early years, the child's education splits him or her: the *mind* can come to school, and the body is permitted, peripherally, to tag along, but the feelings and emotions can live freely and expressively only outside of school" (Rogers, 1995, p. 263, emphasis in text). The consequences of this approach had a direct impact on Progressive Education and on, at that time, innovative ways of looking at and understanding learning and teaching. This impact that has not yet exhausted its value of novelty and we believe is still relevant for education today.

The very motivation for the present book is the perceived lack of awareness about and integration of emotions in educational practice. Both educational literature and educators seem to still tinker around and about the role of emotions in learning, not yet fully free of scientific suspicion towards emotions. This might be a legacy of the Romantic separation of emotion-in-the-body and reason-in-the-brain, which, in the twentieth century, made the very study of emotions impossible, "in the end, not only was emotion not rational, even studying it was probably not rational" (Damasio, 1999, p. 39).

The present anthology aims to break the taboo around emotions in education and contribute to this field with knowledge and evidence that are strictly applied to educational practices. To do this, we focused our attention on a wide range of cases, from primary school to higher and adult education, and on linking our studies to the most recent developments in emotion studies. Although the authors' combined scientific perspective is socio-cultural, we also looked at what neurosciences and biology tell us about the functioning of the brain, mind and emotion. Not surprisingly, the natural and medical sciences tend to align with humanistic psychology, with progressive takes on education and learning, and with pragmatism. Many socio-cultural insights seem to be confirmed in neurosciences, as Immordino-Yang and Damasio clearly point out, "It may be via an emotional route that the social influences of culture come to shape learning, thought, and behavior" (Immordino-Yang & Damasio, 2007).

Affective neuroscience offered us the newest insights on emotions but also a vocabulary for the main conceptualisations on emotions, together with their historical transformation through the centuries. What emotions are, how they can be defined and what they can be used for has been discussed extensively in literature, as well as by the authors of this anthology. The individual chapters solve the definitional issue in a variety of ways, in order to present the reader with

the heterogeneity of the topic. However, we wish here to present a few general definitional guidelines.

According to Damasio (1994) emotions and feelings, rather than being synonyms, are strictly related phenomena that are distinguished from each other. Emotions are the body changes occurring when subjects respond to specific objects (events, artefacts, living creatures and so on) or their mental images (the idea of specific events, artefacts, living creatures and so on). These emotions are external, observable, often universal and dynamic, as the word e-motion itself suggests. On the contrary, feelings are the mental, private experience of emotions, the individual "perceptions related to the body" (Damasio, 1999, p. 340) that are conscious to the subject. A definition that encompasses both dimensions is affect, which in general denotes emotions, feelings and moods.

Psychologist Paul Ekman is said to have discovered a range of six basic emotions that corresponded to specific facial expressions and were common to widely different cultures (Davidson, 2012, p. 32). Happiness, sadness, anger, fear, disgust and surprise were, according to Damasio (1999), universal or primary emotions. Damasio also distinguished secondary or social emotions, such as guilt, pride, embarrassment, emotions that are culturally coded, and background emotions, such as well-being or tension, which are constantly present as a background to our lives.

Emotions can also be classified by intensity and continuity. According to Davidson (2012) "the smallest, most fleeting unit of emotion is an emotional *state*. Typically lasting only a few seconds, it tends to be triggered by an experience" (p. xiii, emphasis in text). An example of this might be when we receive pleasure from the experience of eating our favourite dish. When emotional states persist in time, some psychologists define them as moods ("I am in a good mood"), unless they persist over years, then they can be looked at as personal traits ("I am a positive, optimistic person"). Davidson (2012) suggests that, by means of identification of specific brain circuits, it is possible to determine six emotional styles, which are "consistent way[s] of responding to the experiences of our lives" (p. xiii): resilience, outlook ("how long you are able to sustain positive emotion", p. xiv), social intuition, self-awareness, sensitivity to context, attention.

Outside the neuro-physiological approaches, but consistent with them, Daniel Goleman's research has contributed to the vocabulary of emotions, with his very popular term "emotional intelligence" (1997). As a consequence of Howard Gardner's multiple take on mind, brain and learning, according to the theory of Multiple Intelligences (1994), Goleman focuses on the emotional approach to learning and understanding. Both Gardner's and Goleman's works have been fundamental to the paradigm shift in education that embraces and recognises emotions. Because of their work and the ways in which their approaches were slowly absorbed by educators, the need for more knowledge about emotions and their role in learning grew. In order to address this need we conceived the present book.

THE TEAM OF AUTHORS

The authors of the present contribution are affiliated to the research group FIU (Danish acronym for Research in Education and Cultures of Learning). They have been working within educational contexts as educators and researchers, with education and pedagogy as their research focus for several years. The research group is affiliated to Aalborg University, Department of Learning and Philosophy, in Denmark. FIU has as its main scientific focus the study of education and teaching at a micro and macro level. At a micro level, the group looks at the interaction, communication, relations and teaching cultures that are manifested in teaching situations. The main purpose is a focused attempt to grasp the relationship between the micro and macro levels of teaching and to study the multiple conditions for pedagogical innovation. The group makes use of mainly qualitative methods, such as ethnographic studies and action research, which allow linking of research and development, as well as designing and documenting concrete changes in teaching and education. However, quantitative studies are also valued and welcomed, as the present volume testifies. Research projects that are carried out within FIU focus on teaching and learning in primary and secondary schools, high schools, post-secondary education and universities, professional development at Teachers' Colleges with specific attention to creativity and innovation in these contexts. The projects' purpose is building and extending knowledge about existing teaching cultures or future developments in education, through reflection, description and development of pedagogical strategies, both in theory and in practice.

Currently, the group covers areas such as: innovative educational design; creativity in the classroom; arts integration in curriculum and non-formal learning environments; evaluation and assessment in primary schools; problem-based and project-organised work in high schools; building of study cultures in university education and adult education.

The scholarly affiliation of the group is Aalborg University, which numbers 20,000 students and has been problem-oriented since 1974. Rather than communicating knowledge to students, the educators support the collaborative process of knowledge-creation and knowledge-development within student groups. Students work in faculty-supervised groups, planning, managing and completing a project, which addresses an independently and originally formulated problem. Problem-based learning, projects and group structures form the learning model at the university (Krogh & Aarup Jensen, 2013, Lund & Aarup Jensen, 2013). This model stimulates continuous curiosity among educators, whose role is to facilitate and support students' creativity and initiatives. To support students while they are exploring the world around them implies to a high degree dealing with students' and own emotions, when learning and teaching. This is the reason why writing the present contribution was a deep-felt need in the research group and part of an on-going and long-term theoretical and practice-oriented work.

THE GENESIS OF THE BOOK

This anthology is the product of a thematic research group whose members have been working together for a long period of time. As such, it is a shared effort and a dialogic-based work. Within the authors' team we worked individually when writing the various chapters, but also very much collectively, giving each other advice, challenges, inspiration and internal peer review. Our team work has been strengthened by our regular research-group meetings, where we developed content-related, methodological or procedural discussions on educational dilemmas. For this reason, although the book form is an anthology, we perceive the final product as a collective work – a FIU footprint in the scholarly sand.

Concerning methodological dilemmas, the team of authors discussed the quantitative/qualitative gap and came to the insight that in the present studies, whether based on quantitative or qualitative data, context has been a fundamental element, strongly taken into consideration. We learned that it is possible to take a methodological perspective that looks beyond numbers or narratives by moving the focus of attention to contexts. Neither numbers nor narratives in this study would have been fully beneficial to our understanding if we had not paid the same attention to the contexts of our observations. Methodologically, this anthology responds to a variety of scientific designs, from qualitative interviews and observations to quantitative surveys, from narratives to qualitative questionnaires, document analysis and policy analysis. Methodologies have been chosen according to the researchers' main interests and competencies, together with considerations on what was appropriate to the specific field of observation. Each chapter will briefly specify the basic concepts applied and methodological approaches made use of.

Within the authors' team we attempted to live up to our socio-cultural scientific perspective, making mutual sharing a fundamental structure of our work. As Aarup Jensen explains in her chapter, "a key point in the socio-cultural activity theory is that communication and interaction between people is essential in all learning processes, and it is through communication that socio-cultural resources are created". To a great extent, the present contribution bears witness to the group's learning process.

THE BOOK STRUCTURE

Objects of our attention were educational contexts that work with innovative settings (role play, humour, academic emotions, happiness, arts-based practices, emotions in the classroom, well-being) and that all include a special take on the emotional side of learning and teaching. We specifically sampled cases that met our individual scientific interests and that addressed the emotional side of learning. This also happened against the background of our research group's shared interests, as described above. This meant that during the sampling stage we unfolded our own take on education, looking at creative, innovative, artistic and well-being-focused

learning environments. We attempted to make clear the common threads among and across the chapters by means of meta-communications to the reader. The concluding chapter sums up chapter-specific and general findings, together with possible applications of insights.

Chapter One (Birthe Lund). This chapter analyses students' emotional and behavioural reaction to pedagogical challenges when learning to innovate. The chapter evaluates students' actual responses to participating in a reality role-play, "North Jutland at Play", where 800 high school students were expected to learn from and with each other, when defining and solving real problems, as a kind of experience-based learning process that creates both insecurity and engagement, due to the fact that the result of creative processes in itself tends to be unpredictable.

Chapter Two (Tatiana Chemi and Julie Borup Jensen) outlines an arts-integrating educational development project in higher education (social education studies) in Denmark. The aim of the project was to experiment with arts integration and its potentials for learning and welfare innovation. However, emotional aspects stood out from the empirical material, which was the reason for focusing on the relation between arts, emotions and learning. Through the analysis of data in light of emotions, we found that arts as such may evoke and at the same time handle emotions, shaping them into learning and identity-building in students. We also found a related need in educators for professional development of pedagogical tools to handle and shape these evoked emotions in educational settings and environments. We also discovered that arts in pedagogy evoke emotions in the educators, which calls for work on professional development and learning for teachers in order to take professional advantage of this phenomenon.

Chapter Three (Lone Krogh and Krishna Prasad Giri). In this chapter "Gross National Happiness (GNH) in Bhutanese Education – How is it Implemented in Practice", happiness is understood as a political and ideological concept. Focus is on how the strategy of GNH is being implemented and perceived by principals and teachers in selected Bhutanese upper secondary schools. The authors address the following issues: do GNH policies in themselves create happiness? And, is incorporating GNH in all subjects too challenging?

Chapter Four (Annie Aarup Jensen). This chapter focuses on the student perspective and studies the emotions that students in Higher Education may experience when entering a new and different educational context.

Chapter Five (Sarah Grams and Roman Jurowetzki). This chapter deals with emotions in the classroom and their manifestation within the context of classroom interaction. The powerful role of teacher-student relationships is discussed from both the teachers' and the students' perspective.

Chapter Six (Chunfang Zhou, Tatiana Chemi and Birthe Lund). This chapter explores the similarities and differences of design students' perceptions on humour in experiences of creativity development in project groups between China and Denmark.

TARGET GROUP

With this book we intend to reach an international audience of educators at several levels, including schools, higher and adult education, university colleges, graduate and undergraduate schools, PhD schools. We also imagine possible applications of the content in non-formal learning environments, such as museums, cultural institutions and the like, that is educational settings where the emotions are largely stimulated and cultivated in edutainment or experiential forms.

REFERENCES

Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York, NY: Putnam.

Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Orlando, FL: Harcourt.

Davidson, R. (2012). *The emotional life of your brain*. New York, NY: Plume.

de Sousa, R. (2014). Emotion. In E. N. Zalta (Ed.), *The stanford encyclopedia of philosophy*. Retrieved from http://plato.stanford.edu/archives/spr2014/entries/emotion

Descartes, R. (1989). *The passions of the soul*. Indianapolis, IN: Hackett Publishing Company.

Dewey, J. (1966/1944). *Democracy and education*. Toronto: Collier-Macmillan Company.

Dissanayake, E. (1995). *Homo Aestheticus: Where art comes from and why*. Seattle, WA: University of Washington Press.

Dissanayake, E. (2000). *Art and intimacy: How the art began*. Seattle, WA: University of Washington Press.

Gardner, H. (1994). *Frames of mind: The theory of multiple intelligences*. London, England: HarperCollins (I 1993).

Goleman, D. (1997). *Emotional intelligence: Why it can matter more than IQ*. New York, NY: Bantam Books.

Immordino-Yang, M. H., & Damasio, A. (2007). *We feel, therefore we learn: The relevance of affective and social neuroscience to education. In Journal Compilation: International Mind, Brain, and Education Society*. Oxford: Blackwell Publishing.

Immordino-Yang, M. H., & Fischer, K. W. (2009). Neuroscience bases of learning. In V. G. Aukrust (Ed.), *International encyclopedia of education: Section on learning and cognition*. Oxford: Elsevier.

James, W. (2012). What Is an emotion? In R. Richardson (Ed.), *The heart of William James* (pp. 1–19). Cambridge, MA: Harvard University Press.

Kant, I. (1914). *Critique of judgment*. London, England: Macmillan.

Krogh, L., & Jensen, A. A. (2013). *Visions, challenges and strategies: PBL principles and methodologies in a Danish and global perspective*. Aalborg: Aalborg Universitetsforlag.

Lund, B., & Jensen, A. A. (2013). Creativity development by management training. In L. Krogh & A. A. Jensen (Eds.), *Visions, challenges and strategies: PBL principles and methodologies in a Danish and global perspective*. Aalborg: Aalborg Universitetsforlag.

Phillips, D. C., & Siegel, H. (2013). Philosophy of education. In E. N. Zalta (Ed.), *The stanford encyclopedia of philosophy*. Retrieved from http://plato.stanford.edu/archives/ win2013/entries/ education-philosophy

Rogers, C. (1995). *A way of being*. Boston, MA: Houghton Mifflin Company.

BIRTHE LUND

1. THE NOTION OF EMOTION IN EDUCATIONAL SETTINGS WHEN LEARNING TO BECOME INNOVATIVE AND CREATIVE

ABSTRACT

This chapter analyses students' emotional and behavioural reaction to pedagogical challenges when learning to innovate. The analysis found that creative learning processes were sensitive to partnership and external factors, such as time, evaluation procedures and values. Students' actual responses to participating in a reality role-play, "North Jutland at play", are recorded. In the game, 800 high school students were expected to learn from and with each other, when defining and solving real problems in a local area, in order to learn to become democratic citizens as well as innovative and creative ones. This kind of learning process often creates both insecurity and engagement, due to the fact that the result of creative processes in itself tends to be unpredictable. If education tries to control and avoid unpredictable situations, then supporting the formation of creative and innovative students may be a challenge to the dominating culture of education.

BUILDING INNOVATION CAPACITY MAY CHANGE THE HIDDEN CURRICULUM

This chapter addresses the emotional responses of students engaged in a pedagogical experiment to develop innovative and creative competences within education. During this process, existing practice – including "hidden" practices deriving from *hidden curricula* – is challenged and changed, contributing to both undesirable and desirable behaviour and results. Jackson (1968) is generally cited as the originator of the term: hidden curriculum. The hidden curriculum refers to norms and values that are implicit, but effectively taught in education. This ''incidental'' learning contributes to the political socialisation of students when taught how to deal with and relate to the structure of authority (Appel, 1971). Emotion control and regularity are part of the hidden curriculum, which refers to the practices students experience when being educated. It reflects how students learn to behave in socially appropriate ways in order to meet the challenges and needs of society – in order "to fit in" and adjust behaviour by social interaction. Through descriptions in the curriculum, students are expected to be democratic and good citizens, as well as being qualified and skilled in order to meet the (sometimes mixed) needs and expectations from

civil society and the labour market. Creativity and innovation are seen as attractive means for improving national income and growth. Indeed the national educational system is attracting growing political interest, as educational policy is regarded as a vital part of global economic competition[1] (Ahmad & Seymour, 2008). This policy supports notions of creativity-enhancing teaching and learning processes in order to fulfil these expectations. At micro-level this may create a growing awareness of the hidden curriculum and emotional control and regularity within education.

In addition to sociological notions of students' emotions, there is growing interest in the knowledge of neuroscience and new studies of emotions within this field. Mixing pedagogical knowledge of experience-based learning and neuroscience may add new perspectives to the notion of emotions in learning. Both bring the body and the mind into play. We learn from neuroscience and the biology of the brain that emotions are motivating. They stimulate and direct human behaviour by adding value to different actions and thereby operate as a guide for our actions, while language and cognition are seen as "modules between senses and motor activity" (Jensen & Skov, 2007). Within neuroscience, emotion and cognition are regarded as secondary neural systems, where happiness, sorrow, pain and empathy direct and shape behaviour. When evaluating situations, humans are led by emotions as they direct or re-direct impulses to action. In other words, neuroscience argues that senses and sensibility help us to choose and act more sensibly (Damasio, 1999).

The assumption is that the general functional mechanisms of human emotions are universal characteristics of our mind, but that particular values and intensity of emotions may be specific to different cultures as contents, while intensity and duration of emotions can differ (Pekrun, 2007). This is in line with philosopher Dewey's (1920, 1938) understanding of learning as an active, enquiry-based exploration of the world, in which senses and feelings direct the student and stimulate reflection, as the world responds to human actions when dealing with the world. In this notion, learning evolves in combination with social response, communication and shared reflection, hence student's understanding of the world is developed through active construction of experience and may then be sensitive to the hidden curriculum they experience in schools.

Recent catch phrases like "managing emotions to foster innovation" and "manage feelings effectively and learn how to choose feelings deliberately" (New & Improved, 2004) indicate a parallel new commercial discourse and interest in emotion as "fuel" for creativity and innovation, outside education, in which "the brain" is expected to control and re-direct emotions. Only recently have philosophers of education begun to take a critical interest in the contribution neuroscience might be able to make to our understanding of education (Clark, 2015). How students' experience is received via the senses and transformed into concepts in minds is still to be explained. Moreover, this seems to be even more complex to explain than the chemical and electrical elements of synaptic connections and complex neural pathways. Consequently, there might be little in neuroscience that can be easily translated into educational practice.

For several years, the relationship between mind and brain has been described as a physical, psychological and philosophical issue of relevance to education. The philosopher John Seal plainly states in "Minds, Brains and Science" (1984)" that humans do have subjective, conscious, mental states and these are as real and as irreducible as anything else in the universe (Searle, 1984), though they may be hard to measure. According to Searle, and John Dewey, the mind and body interact and relate, but are not two different things. This view differs from the dualism of the philosophy of science, which refers to the dichotomy between the "subject" (the observer) and the "object", and tends to separate mind and body, as human senses to some extent are regarded as misleading and possibly inducing biased perceptions. According to philosophers like John Seal and John Dewey, feelings, perceptions, beliefs and attitudes are to be looked at as part of human minds. Emotions may be regulated by biological processes connected to the brain. We know that drugs to enhance cognitive performance and regulate emotions are available (this might raise other ethical questions about students' access to and need for drugs, see Clark, 2015).

Within the context of classroom activity, students are expected to display emotions in particular ways, conforming to standards for appropriate emotional expressions during classroom transactions (Schutz, 2007). The ability to control emotions in appropriate ways still seems to be an important aspect of schooling, as part of the hidden curriculum. As a growing number of students are being diagnosed with ADHD core symptoms – like inattention, hyperactivity and impulsivity – this challenge to discipline may also influence pedagogy in schools and the notion of normal behaviour. The U.S. Department of Education (2003, p. 13) writes of how Impulsivity "may lead to careless errors, responding to questions without fully formulating the best answers, and only attending to activities that are entertaining or novel. Overall, students with ADHD may experience more problems with school performance than their nondisabled peers". This quotation indirectly states expectations of students' behaviour and separates the disabled and non-disabled. According to the hidden curriculum, teachers are expected being able to control (or discipline) their classes. This may be achieved in various ways, while teachers are expected both to take control in the classroom as well as being innovative when creating new conditions for students learning.

ENTREPRENEURIAL AND INNOVATIVE SKILLS

The notions of feeling and emotion as important elements in development of entrepreneurial skills were put forward in 2006 at the conference "Entrepreneurship education in Europe: fostering entrepreneurial mindset through education and learning" (later referred to as "The Oslo Agenda") by initiative of the European Commission. The intention was to bring entrepreneurship into the agenda within education. Concrete pedagogical suggestions were made, such as bringing entrepreneurs into the classroom and involving students directly in entrepreneurial projects by enabling them to act as entrepreneurs. The suggested method was inspired

by experience-based learning. It was expected that this pedagogy would challenge education since it involved students' feelings and emotions:

> Using active learning methods is more complex using than traditional teaching: it requires engaging students´ feelings and emotions in the learning process. Educators/facilitators must be able to create an open environment in which students develop the necessary confidence to take risks. (The Oslo Agenda for Entrepreneurship Education in Europe 2006, p. 46)

In terms of pedagogical organisation, group work was suggested, because: "Group work on concrete cases is an effective method, as it improves the understanding of real issues related to entrepreneurship and engages students in finding solutions to real problems" (ibid, p. 90). The logic is that if students are expected to be risk-takers, education may create environments which allow them to experience "risk", meaning dealing with insecurity and not being able to know in advance the outcome of initiatives.

Both in Norway and Denmark, there is a strong tradition of viewing educational institutions as vital to the making of civil society. In particular, schools are seen as a stronghold for democracy and the welfare state, the purpose of schooling being grounded firmly within the broader "Bildung" tradition. In comparative educational research, transfer or borrowing of policy and practice is a recurring theme, and the dominating understanding of entrepreneurship education may be seen as an example of borrowing of policy (Ottesen et al., 2013) and this understanding of entrepreneurship may challenge the "Bildung" tradition (Lund, 2010). In this notion, the concept of education becomes a lifelong process of human development, rather than gaining certain external knowledge or skills, and individuals are valued as unique creatures. Consequently, students and education are not (primarily) seen as a means to fulfil other purposes.

The Oslo Agenda recommended student behaviour to be directed, in order to create (positive) experiences from risk-taking as part of building an entrepreneurial mindset. Recently, development of innovative skills and fostering entrepreneurial mindset are part of the written curriculum in the Nordic Countries (Nordisk Ministerråd, 2011). Students are expected to become entrepreneurial by *being* entrepreneurial, not by learning *about* entrepreneurship. Being entrepreneurial is associated with purposeful, active behaviour, making things happen, taking advantage of opportunities and bringing about change[2] (Bassanini & Scarpetta, 2001). This understanding of entrepreneurship implies that students' behaviour, values and concepts of innovation may be objects to formation and new "Bildung". This seems particularly interesting, since it means that students' behaviour will need to be directed in new ways. Based on the assumption that behaviour is related to emotions (see above), students' emotions may have a role in developing creative or innovative students.

We attempted to substantiate this in a case study, "North Jutland at play", founded on experience-based learning and problem orientation. Danish high school students

(aged 16–19) were expected to learn how to become innovative, creative active citizens by collaborating with local government and politicians, in situations that stimulated students' interest in an actual political challenge. Students were expected to collaborate and compete in an open environment, as well as to learn from and with each other in order to solve and define real problems in their local area. This experiment, therefore, meets the expectations stated in the Oslo Agenda for creation of pedagogical environments that stimulate risk-taking and innovative action. By analysing this complex context for student learning, we may broaden understanding of the interplay between socio-cultural factors, emotions and learning by posing the question:

How and why did this pedagogical experiment influence students' collaboration, communication, behaviour and motivation?

Before the case study will be described and analysed, I will first discuss the concepts of creativity, culture and emotional labour within the educational context in more depth.

DIFFERENT PEDAGOGICAL CONCEPTS OF CREATIVITY

As there are different concepts of what it means to be creative, there may be different pedagogical concepts regarding formation of creative students. In some theories, the creative individual, personality and motivational aspects are important, which may neglect the importance of socio-cultural and economic factors in developing innovation and creativity.

The dominating literature over the last three decades has contained personality studies of creative individuals (Amabile, 1983). Some were studies of biographies and autobiographies by well-known creative individuals; others, of creative individuals in laboratory settings. Research also examined different individuals completing personality and intelligence tests, in order to identify creativity. Some considered the cognitive skills necessary for creativity (Newell et al., 1962) while others compared effects of particular social or physical environments on creativity.

But several creativity theorists, like Amabile (1983), have in recent years included social as well as psychological factors (Csikszentmihalyi, 1988; Gardner, 1991; Sawyer, 2006). The integrationist theory applies a socio-cultural approach that focuses on the complex social and interactional processes resulting in creativity and innovation (Sawyer, 2006). Interaction in contexts then becomes the focal point of analysing and understanding creativity. To Csikszentmihalyi, creativity (with a capital C) occurs at the interface of three subsystems – an individual absorbs information from the culture and changes it in a way that will be recognised by gatekeepers and judged relevant to the field for inclusion into the domain, from where the novelty will be accessible to the next generation. In this sense he stresses the social aspect of recognition and change (innovation) as related to cultural acceptance and recognition (Csikszentmihalyi 1988, 1997, 1999)

In Amabile's research, first-person accounts of creative activity imply the notion of recognition, but contain ample evidence on the creativity-enhancing effect of "working on something for its own sake", and the creativity-undermining effects on working on something for the sake of meeting an external goal. While innovation is studied by disciplines such as sociology, economics, engineering and organisational theory, creativity has been examined almost exclusively within psychology, due to the fact that innovation tends to be driven by extrinsic motivations (Ford, 1996). In some individuals, competition stimulates creativity, for others competiton inhibits creativity because it is extrinsic, and in that sense distracts the potential creator. Thus, it can be assumed that the individual's personality and the interpretation of the individual are to be considered (Runco, 2014).

Creative efforts are often seen as self-expressive and intrinsically motivated. The Intrinsic Motivation Principle of Creativity is the cornerstone of the social psychology of creativity development. Creativity research indicates that in general "the intrinsically motivated state is conducive to creativity, whereas the extrinsically motivated state is detrimental" (Amabile, 1983). An unconstrained social environment is expected to be most conducive to creativity. The assumption is that if a task is intrinsically interesting, the imposition of salient extrinsic factors on task engagement will lead to the self-perception that one is performing that task primarily to attain the extrinsic goal. Intrinsic motivation will decrease accordingly.

Amabile proposed that problem identification and response generation of the creative process, where the novelty of the outcome is importantly determined, may require intrinsic motivation that is unencumbered by any significant extrinsic motivation. But preparation for problem-solving and response validation may be positively influenced by extrinsic factors if they serve intrinsic goals. This means that any extrinsic factor supporting one's sense of competence or enabling deeper involvement with the task itself without undermining one's sense of self-determination – thereby adding positively to intrinsic motivation – should consequently enhance creativity. This indicates the importance of appropriate response to students' creations.

Research indicates that we choose different problem-solving strategies. Amabile (1996) introduced the metaphor "maze" to illustrate this. A maze represents the problem to be solved or the task to be completed. Exiting the maze is equivalent to arriving at a satisfactory solution to the problem or a satisfactory completion of the task. Students may choose a straightforward algorithmic approach for solving the problem, or a heuristic approach of deviating from the straight path by exploring the maze and by risking ending up in a dead end. Different strategies may challenge the students' collaboration process. Amabile argues that, due to the focus on individual differences, some potentially important areas of enquiry into creativity have been virtually ignored, since there has been a concentration on the creative person to the exclusion of "creative situations" as circumstances conducive to creativity.

Creativity development may in general be regarded as a kind of problem-solving. Some individuals employ creative problem-solving tactics and procedures when they are faced with problems, and some even prefer problems and ambiguity, so much so that they sometimes seek them out (Runco, 2007). Within the creative process, some (so-called) creative people describe how problems stop being problems and become joy when "the situation that was once a problem has become something completely different, namely, an opportunity or challenge" (Runco, 2007, p. 277). And this transformation from being a problem to being an opportunity and challenge seems to be an important driving force for the learning process in itself. These findings indicate that emotions such as joy, self-expression, intricacy, as well as persistence, are linked to creativity. Consequently this may be crucial to strive for when supporting innovative learning processes by creating creative situations within education.

CREATIVITY, CULTURE AND LEARNING

Scholars researching creativity link its development to problem-solving, intrinsic and extrinsic motivation, and persistence. From creativity research we also notice the awareness of context, which influences the creative situation and the output – the field and the domain in which a "subject" is interacting. Social approval and value influence the creative process, and creators seem to be emotionally engaged and motivated depending on the assignment, awards and/or their interest in the problem to be solved or the product to be developed. From the perspective of social constructivism, creativity and problem-solving are part of the problem-solvers interaction in a cultural setting, as culture offers the basic language and knowledge base for the creative process. The culture influences both the interaction between the creators and the subject to be created. As Amabile (1996) states: Creativity is constituted and influenced by a social context. Part of the social context are the approved social norms and expressions regulating interaction and collaboration, as previously mentioned in relation to the hidden curriculum. Consequently, student interaction with peers and teachers becomes interesting, as it constitutes the actual social context for student learning.

The creative process itself is part of a dynamic balance between imagination and judgment. Students must imagine what the challenge implies and how to change the current situation. This process will be influenced by the existing school culture. If students are expected to deal with real problems and develop collaboration skills, this may challenge the dominating school culture, as all students are expected to take initiatives and be self-regulated subjects dealing with authentic problems.

Real challenges rarely have set answers. Students will not find the final solution in any book or other information source. They must discover it for themselves. Then personal frames and references, attitude and involvement must be activated. How the students actually use and gain knowledge might then be dependent on cognitive

and emotional support from peers or other, in order to develop and unfold creative thinking, critical thinking skills, meta-cognition and motivation.

Participating in a creative process implies active engagement in a task when trying to think of new ways of doing things, including problem-solving (Sternberg, 2006). When students are dealing with real challenges and objects they really care about and feel strongly for, this will reflect on the creation process and the students' motivation. Students may need to develop some persistence in order to develop creative solutions. This process may imply accepting mistakes and failures, in order to create new solutions, without knowing the "right answer" and the route to the solutions, and several revisions and interactions are normally needed. When creating, students are in a process of constantly balancing between imagining (what would be beneficial) and evaluating and judging when comparing, what is actually accomplished. Differences in levels of ambition lead to different criteria for acceptance of various solutions. This may influence the creative process as the process of elaborating ideas is sensitive to the emotional level of trust, when deciding which ideas to try out and which to discard. Social and environmental conditions – positively or negatively – influence the creativity of most individuals. From this perspective it is relevant to study the interdependence between human beings and their socio-cultural context, as this is expected to influence meaning-making and co-constructing of knowledge, being sensitive to the emotion in play.

EMOTIONAL LABOUR OF STUDENTS AS WELL AS TEACHERS

In order to evoke innovative competences and creativity students must be engaged in creative situations. Mindful experience and emotions evolve in most creative processes depending on intensity and students' engagement and it may therefore be a pedagogical challenge for educators to create engagement and to encourage students to exhibit engagement. As defined in "The Glossary of Education Reform "(2004):" […] student engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education". Consequently – in order to enhance "desire for" and "joy of creation" in development-oriented education, a culture must be established that evokes the desired emotional needs.

It is therefore part of teachers' work to evoke and support these desired emotions in order to create engagement. This is classified as "emotional labour" defined as "the effort, planning and control needed to express organisationally desired emotions during inter-personal transactions" (Morris & Feldmand, 1996, p. 987). Teachers may internalise and enact roles and norms assigned to them by the school culture through what are considered (by Zembylas, 2003) as "emotions connect people's thoughts, judgments, and beliefs, and it can be said that emotions are the 'glue of identity". The interaction with other people is then what defines our subjectivity,

because "without this moment of otherness we could not talk of recognition and mutuality, but only of a re-duplication of the self" (Zembylas, 2003, p. 222).

Emotions are powerful pedagogical tools and a culture that denies emotions to teachers also denies them to students (Meyer & Turner, 2007). Teachers and students are infused with emotions through interaction and both attempt to modify aspects of the emotion experience, hence emotion regulation can influence the intensity and the direction of the experience as well as how the emotions are expressed. If teachers learn to control their emotions this might lead to a restricted set of emotional responses. Early studies by Hargreaves found that the school context restricted possibilities for emotional expressions, as well as restricting possibilities for emotional states (Liljestrom et al., 2007). The concept of emotional labour indicates how cultural and emotional norms for expressions of emotions influence notions of emotions. Culture affects how we perceive emotions as "welcome" or "to be suppressed" and which emotional responses are imposed as being normal or to be regulated. These processes are induced via values that may for example support neutrality and objectivity (Zembylas, 2007). How students actually perceive express emotions may then play a crucial role in the way students and teachers "see" each other as individuals. Emotions then become political and social issues, organised and managed by construing of power relations (Zembylas, 2007).

Both teachers and students may fear not to be able to control passionate feelings, as they may be perceived as "wrong", and not being able to give the "appropriate social responses" to the expressions of passionate feelings. Students as well as teachers are influenced by responses from other students, including responses to gender roles and social status. Students thereby develop a sense of who they are, according to the response of "the other" – including being "creative" or "innovative". In these "dialogues", students are affected regarding their concept of who they are, as well as what they are expected to be. During the educational socialisation process, students then experience naming and framing of emotions, as well as the appropriate socio-cultural response. From early childhood, students experience this "hidden curriculum", which consists of what students learn in an educational setting, in addition to the educational objectives (see also Chapter Five, by Grams and Jurowetzki in this book for the role of emotions in implicit and explicit learning processes).

In the official educational policy in Denmark students must be innovative and entrepreneurial, which means being able to observe new possibilities, think in new ways and transform ideas into value (Ministeriet for videnskab, teknologi, og udvikling, 2010). Students must also be "able to think for themselves, handle insecurity, be able to set ambitious goals and reach these" (ibid, p. 4). Students' desire to be entrepreneurial must be stimulated. Schools are therefore expected to develop students' "desire for learning", as well as creative and innovative competences. Keywords from the innovation discourse are: "the ability to regard possibilities", "take initiatives" and "transform ideas to actions" in order to generate value – social,

cultural or economical. These new political intentions may create new norms for behaviour and may thereby challenge prevailing concepts of "duty", "discipline" and "rule following" from the hidden curriculum.

From a socio-cultural perspective feelings and expressions are mediated and communicated through language and the culture of education. In the creative learning climate students are expected to develop the "skills to solve self-defined problems" and "the ability to cooperate with peers", this implies abilities such as self-management and self-discipline. Given this, students within education still take part in a socialisation process that approves their ability to control and manage feelings. In order to be successful, students may learn to come up with new appropriate social responses, knowing when to be disciplined and obedient, and when to question or violate existing rules. From at pedagogical point of view it is relevant to know how students respond to such transformations in education.

THE CASE

In problem-based education students are expected to be motivated and stimulated by solving real challenges, as they are then dealing with open and partly self-defined problems. As mentioned previously, this may lead students to participate in a challenging process, as they are expected to take the lead. In the case presented here, students' response to changing conditions for learning is central. They experienced established school rules being violated in different ways. Teachers were removed from the learning environment and students were left alone in their classrooms to manage themselves and each other. Teachers were substituted by technology (social media and web-guide) to allow learning practices to go outside the classroom environment and into open, public spaces across the whole local region. 800 students were involved at the same time on the same overall theme. Students were networking and collaborating both outside and inside their own schools[3]. The "North Jutland at play" experiment employed mobile technologies and allowed students to connect who did not share contiguous spaces. They could also relate their interactions to a wider range of people outside education, as part of the game. The realisation of this educational design turned out to be a great technical, administrative and organisational challenge for managers of the Region. The overall purpose was to stimulate a discussion among the students to address a problem perceived in this part of Denmark, namely that more and more young, educated people are leaving the region. Ideas for overcoming this problem were to be collected and applied in political decisions.

During the two days of this experiment, the normal timetable was cancelled and students had to keep track of time and manage themselves. Schooldays lasted as long as students agreed on, deciding the time they would spend on the different assignments. In short, students had to change their normal habits to fit in to this new learning environment. Even though it was just for a very short period of time, students experienced deviation from legitimate routine actions. How did these

changes influence students' learning environments? Did the students manage to collaborate, to compete and to create at the same time and how did this influence students' engagement, creativity and innovative skills? Before answering these questions, the educational frame for this experiment will be described.

The Pedagogical Invention

The case is an example of a pedagogical and didactical "invention". It breaks with current pedagogy and traditional ways of organising education in this high school context. Classes were a mix of students from different high schools in collaboration and in competition. Students were given a voice and were dealing with "real" issues and "real "politicians but the game incorporated fictional as well as playful elements. ICT technology linked the 800 students, regional administrators and politicians together in "Nordjylland på spil". As motivation, an invitation was sent to students, indicating that they were expected to participate in a competition during time at school. The winning team would be rewarded financially. A video gave students more information:

> Is your idea worth 10,000 kroner? What could give new cultural life to our area? Where could we find new business ventures in North Jutland? How could we create better opportunities for entrepreneurs? How to bring North Jutland to the forefront of education and learning? What X-factor could persuade you to stay in North Jutland? Now you have the chance to try out your ideas for the future of North Jutland. See if they can last, when 6–800 students in North Jutland compete for the best idea.

The game was described as "the ultimate challenge when it comes to strategy, cooperation, alliances and negotiations". It stated a need for strong strategists and trained users of Facebook, YouTube and Smartphones. It said the competition required coordination and a variety of skills. Students were invited to participate in the mission"to make a suggestion on how to develop and prepare for the future in competing on points against 30 to 40 other classes from North Jutland, which they are to hook up with for the first time. Judges received student assignments electronically and the students gained points for their assignment, if it was handed in (uploaded) in time.

The Region established a "television channel" (NPN-News) to broadcast general information to students. In this way the leader of the game could connect to the participants, in order to guide the students and at the same time inform them about rules and practicalities through interviews. The news channel created a sense of belonging and interconnectedness between participants, as individual students were portrayed and interviewed in this live TV setting. The information technology and devices served to anchor the information students gathered in different ways. The students were invited to express their ideas and information in artistic productions – pictures, photos, songs, plays and different combinations of these genres in order to

gather points. Production of these created a playful mode in some classes, as well as including a certain element of unpredictability, since creating songs within "school time" was new to many students. Students were expected to deliver useful ideas to regional planning and the game went on for two days during extended school hours (from 8 am and as long as the students wished to participate).

Day one took place in the students' regular schools (gymnasium and local community). The groups were to accomplish different tasks that awarded points, while they also had to make contact with classes in other schools via social media and find an alliance partner who shared their development idea.

Day two gathered all participants in the nearest city, Aalborg, and divided the classes into 5 different activities referring to themes of the regional plan. Based on points won by each group from completing different tasks, the participating teams (classes) of all schools gathered in a sports hall. Here they represented their alliance's development idea for Northern Jutland to the other teams who could now give points to each other's ideas. A selected representative from the most successful alliances then met in the seat of the Regional Council. During this meeting a new round of mutual negotiation and point distribution was initiated. The students were then put into the role of politicians guided by the "real-life" head of the Regional Council, as well as by other local politicians who attended in the role of judges in collaboration with the students. Meanwhile the students remaining in the sports hall were able to follow the voting and negotiating at Regional headquarters by videoconference. At the end of the day, all participants met again in the sports hall to celebrate and enjoy the participation with good food, music and a stand-up comedian.

In this setup, the new hidden curriculum was designed to value students' ability to take initiatives (explore, post questions, find support for ideas and so on), to collaborate and express attitudes and ideas in new and artistic ways, as well as achieving strategic actions and completion. But how did the students respond to these challenges and how did students control and regulate emotions when constructing a new creativity-enhancing learning climate? Below I will present findings related to structural changes.

Successful Participation Calls for New Rules of Social Adjustment

Students were introduced to a game and had to figure out how to manage the rules of the game, while searching for meaning and criteria to be met in order to be successful. In every game there are goals to be reached. Videogame research has shown that the concept of goals guides decision-making and attitudes, as the goals provide a means for discussion and decision as to the most advantageous outcome (Lankoski, 2007). The preferred outcome directed students' engagement. The various classes had to team up with another class to revise and combine the class's suggestions on regional development – alliances were formed. Classroom observations indicate, it was a challenge to compete with other classes while each group had to solve different small assignments in time, in order to gain points. This implied a need to gain enough

points to be an attractive partner to other classes. The fear of failing in this, when not all classmates were engaged in the process, seemed to be potentially stressful. Classroom observation showed very relaxed students at the beginning of the day and it took a while before most students realised that time and deadlines were important goals to reach, in order to gain points and thereby become an attractive alliance partner. An observation from one class showed how a smaller group of students tried to solve an assignment, handed in their solution, but did not get any points, as they did not manage to do it in time. Simultaneously these students realised other classes already had more points. This was a new experience! Due to this response, they learned that all students in the class had to be active in order to have a chance to win the game. Consequently, they became interested in their classmates' different skills and this gave some students a new chance to be seen as a valued member of the class. At the same time, it frustrated several students that time was an important factor and differences in skills and motivation then became an important issue. What students disliked most about this experiment was the stress these tight deadlines imposed, as well as the serious consequences of missing a deadline by, say, 3 minutes. Here, students experienced conflicts, frustrations and joy related to freedom in choosing assignments. The students said they learned a lot about how difficult and stimulating it is to collaborate and manage collaboration without clear goals and a teacher's directions. Students reported this as a huge challenge – working with the whole class without a teacher. They also found it challenging "to coordinate your work with others and have an overview".

One student expressed mixed experiences: "(I learned) that our class works well, if we really want. Organisation is important, plus the attitude towards deadlines is extremely important! Especially Tuesday [the first day]". Another student experienced "that there are not so many in my class who are able to cooperate (or will) when it really counts. In the end, people are really childish to work with. But I also learned again that I make too great an effort for something compared to the rest, since I cannot bear it in myself." Students became more aware of the benefits of collaboration: "I think I have learned that it is important that we work together. Our idea became really good when we cooperated with the other team".

The "new rules" (the game's "hidden curriculum") in this case seemed to stress the need for keeping track of time, the importance of overviews and management when collaborating. During this process students showed different emotions – such as happiness, related to progression towards or completion of a goal, which created excitement and happiness when classmates produced a "product". This was immediately rewarded by other peers. Students expressed sadness or disappointment related to loss or failure of a valued goal, while anger and frustration related to situations where students' goals were blocked. These emotions were expressed in different ways depending on social responses appropriate to the context. If classmates' frustration was expressed in inappropriate ways, the"pushy students" had to consider that if they offended their classmates, they might leave the class as they were free to go home. Consequently the workload of "missing" classmates would have to be

substituted. So competition stressed the need for active collaboration and created a sense of belonging among classmates as they all were on a common mission – the creation of a better North Jutland.

Time Pressure Creates Intrinsic Motivation, Stresses the Need for Collaboration and Reduces Quality of Ideas

The game concept was chosen in order to create interest and prevent boredom. All – and very different – kinds of output were evaluated, based on different criteria, and released points. One criterion to be met was that the assignment had to be handed in within a short timeframe. Students showed different reaction to time pressure. To some students who were capable of a quick response, this created excitement and engagement. But it proved very frustrating for students who wanted to create more elaborate ideas and they claimed that time pressure fragmented and violated their work process as well as their products and ideas.

Some students were driven by intrinsic motivation and time pressure may have become a synergistic extrinsic motivator to them. Extrinsic rewards have been found to reduce intrinsic motivation in some circumstances. This can be evident in working for extrinsic rewards, according to Amabile, as this tends to focus attention more narrowly and orient people towards what is expected, resulting in more standardised products. Students tended to hand in several different inputs, instead of choosing a few and pursuing them in depth. The hunt for points stimulated quantitative output, but created motivation and participation. One student formulated his experience in this way: "I do not think there was enough focus on the most important assignment. All the small assignments took up too much time on the first day because we wanted to get lots of easy points as fast as possible. Because of this, the most important thing – our suggestion – did not get enough priority".

Some people are convinced that time pressure stimulates creative thinking, while others are certain it stifles creative thinking. Thus, depending on the conditions, time pressure may enhance or suppress creativity (Amabile, 1996). Some students valued the time pressure, since it forced them "to prioritise and make teams more efficient". As long as students were eager to win, time pressure and tight deadlines stimulated engagement but also led students to choose easy assignments instead of directing energy to come up with the best solution to the political question. Conflicting goals and different perceptions of meaning influenced students' engagement and interest in the game.

Role Play Allowed Students to Feel What it Means to Participate in Politics; They Appreciated that Authentic Politicians Were Listening to Student Voices

Some students, representing the most successful alliances, participated in role play, aimed at gaining support for their local development idea at a meeting chaired by real politicians in the town hall on the second day of the game. Role play offers the

unique possibility to experience physically and emotionally how it feels to make decisions under pressure and to be exposed to the public. Here, students in the town hall were watched by all other students from the sports hall via video transmission. Some students were stressed by being exposed to aggression and anger from other students, whose alliance was no longer in the game and who consequently had no chance of winning "North Jutland at play". These students said that "other students had betrayed them" and that "they felt like they had been stabbed in the back with a knife". They were frustrated, as they realised that their goal was out of reach.

Students were driven by different goals. To reach one goal – inventing a useful idea to create a better North Jutland for young people – students had to relate to another sub-goal to gain as many points as possible, which was part of the game. Some alliances were powerful from the start, seeking strong partners in order to get even more power. Students thus experienced the advantages of acting strategically in order to get votes and/or get their ideas promoted. Since students had to act strategically and vote for the right alliances, they also felt some emotional and ethical conflicts when promoting the best idea to be used by the politicians – should they vote for the best solution or be directed by strategy in order to be the winner of the game and satisfy those students driven by the desire to win?

Some students responded to the role-play element by dressing like stereotypical politicians in business attire. They were acting as if they were politicians by taking on the role of a politician. They regarded the process as a role play – as fiction. Through this role play, students experienced and got an idea of what it felt like to participate in politics. They were given the possibility to gain real influence, as well as experiencing strategic action and power games. Student learned from the practice in which they were situated but did not draw the same conclusion, due to the meaning they created through participation. Some students valued the importance of dialogue with the politicians, "the feeling that politicians actually wanted to listen to us and our suggestions" and "participating in decision processes and having the experience that people were listening". Others expressed their experience in this way: "I thought it was exciting to negotiate with the other alliances and experience the fight of convincing others that your suggestions are the best". In other words; some recognised they were participating in a real political process, while others perceived the experience from the perspective of a game, driven and motivated by the number of points and paying less attention to the content, being disappointed about not being the winners.

Collaboration Was Regarded as the Biggest Challenge to Students

In a questionnaire administered before and after the game, students were asked to indicate the most important lessons learned. The majority of students referred to collaboration as the main challenge, as well as the most beneficial experience. Collaboration was structurally imposed on students, as without it the mission could not be fulfilled. This mixture of competition and collaboration was both

harming and stimulating to creativity. Different attitudes, working styles and values seemed to complicate students' collaboration but also added more diverse ideas through conflicts of needs, preferences and interest. Different conceptions of goals influenced decision-making and discussion on advantageous outcomes. This environment changed students' habits, after primarily being concerned about their own contribution and individual rewards towards collaboration, while some students missed feedback and directions from teachers. Observers recognised that initially most students were not really involved. No one was telling the groups how to manage the situation and it seemed as if they were waiting for someone to give directions. But they had to manage themselves by creating new structures and in this way students soon became aware of what their classmates were (or were not) doing. In this new culture, all students were expected to be active and supporting. These experiences made some students reflect on their own participation and interaction, indicating elements of transformative learning through self-reflection and reported changes in attitudes, such as:

> I learned to be more open to other students' proposals, and the whole class has learned to work well together.
> I learned to be more open.
> I learned that attitude is extremely important.
> I learned that you must believe in what you are doing, by believing in what you are doing, you also get others to believe in you, but it should in this case, of course, be realistic and thoughtful.

Other students confirmed established self-perception through participation: "I learned once again that I work too hard compared to the others". Others compared the importance of cooperation by creative thinking: "Cooperation is important, but it is also important to think outside the box." Students were saying that, in order to be innovative and creative, you have to believe in your own capability and convince others to engage. The importance of planning, coordinating, administration and leadership was recognised by students as important and challenging. When students referred to important lessons from this experiment, they were primarily referring to the social aspects of learning enhanced by student interaction, indicating the notion of social interaction and regulation. Dealing with emotions when arguing, disagreeing and creating seemed to add quality to the experience. Emotions directed the influence of students' engagement when evaluating the contexts and assignment of the situations as either rewarding or the opposite.

Students developed different coping strategies. A few students actually stopped participating and left the experiment, when they realised they could not change or add any new elements to the situation. Student interest in the subject and their expectation of mastering the challenge may then be regarded as important for engagement and involvement. Competition and the formal rules of the game (like external time pressure) influenced students' collaboration. If students were unable

to collaborate with classmates they could not win the game. When they realised that the possibility of winning was out of reach, their engagement reduced dramatically.

Creativity- and Innovation-Enhancing Learning Processes Are Emotionally Challenging

When participating in this role play, most students had to break with routines and habits in order to reach the new goals. This made it possible for them to engage and participate in new ways. The game designers had assumed that most students would be self-directed and able to collaborate, but according to students' own evaluations, this is precisely what they had to learn through new learning settings.

In order to develop creative and innovative skills, therefore, students may be offered the possibility of demonstrating creativity. In this, they must be encouraged to collaborate in an environment that permits self-expression and the use of imagination to create something new, such as these new ideas for regional development. This game seems to have evoked social engagement by creating new types of sociability and interaction among the participants due to structural changes. The game opened new possibilities for social networks in both the physical and the digital spaces.

Students' response showed that they were motivated by different aspects of the same context – some by the competition, time-pressure and points to be won, others by the political invitation and dealing with real-life problems. Others were very eager to be the winners and were less interested in the general topic itself.

From a socio-cultural perspective of creativity, it was expected that the actual learning culture would influence students' ways of participating. Some might experience joy in the face of challenge and invest a lot of energy in the process, while others experienced little challenge, which for some was cause for indifference. Common sentiment and attitude, which seemed to undermine student collaboration, were apathy and lack of interest, though the dominant perception was of a high level of commitment and engagement.

Experience-based learning may enhance creativity as the creative process is connected to finding problems which is strongly linked to the understanding of the problem. In this creativity-enhancing process, students were expected to define or formulate problems or challenges in ways in which they were able to deal with them. This was expressed by preliminary goals like: "I want to come up with an innovative idea to stimulate rural development" (intrinsic motivation) or "I want to be the winner of the game, and so I have to come up with an innovative idea" (extrinsic motivation). These expectations might lead to unpredictable series of enquiries: what does rural development mean? How are we to influence environmental planning? This knowledge-building process seems to be a vital part of understanding and formulating challenges. The quality of the experience depends on how students actually perceive the given challenge, as this influences gathering, organising and analysing information from different sources.

This case shows how refining and testing ideas, and implementing decisions and action plans imply dealing with evaluating questions and dialogues such as, is this outcome/communication/activity really what we intended? During this process, students are confronting their ideas with peers and others, in order to evaluate if they still need refining and improvement – depending on either the students' own ambitions or external evaluations. Experience-based learning may then be perceived as very emotional, challenging, time-consuming and unpredictable by both students and teachers, as students are dealing with the risk that the outcome will not meet the expectations or be positively valued.

The concrete creative design process and its development are influenced by the actual school context – the timeframe as well as the support and the evaluation – which seems to influence the quality of meta-cognition, the knowledge base and personal variables, such as persistency, personality and collaboration skills. From this interactive learning perspective, it is relevant to gain more knowledge about school culture – including the hidden curriculum – as this may direct students' possibilities to benefit from social construction of knowledge. Whether a pedagogical setup actually supports or violates creative efforts seems to depend on how it is perceived and selected by the students, as well as on the value students add to the process, given that learning by participation implies both transformation of ideas and knowledge, as well as self-perception.

The analysis found that creative learning processes are sensitive to partnership and external factors, such as time, evaluation procedures and values. Students' actual responses to the process are difficult to calculate, if students are given the possibility and freedom to participate in the problem definition process, in order to stimulate the engagement needed to get involved in creating something which is new to them. This process tends to create both insecurity and engagement, due to the fact that the result itself is unpredictable.

If education tends to avoid unpredictable situations due to the construction and creation of educators' "emotional labour" (adaptation and regulation of emotions), then supporting the formation of creative and innovative students may be an emotional challenge to the dominating culture of education. Therefore, when we in educational settings maintain to reward the ability to come up with the correct answers to pre-set questions, we may consequently impede both students' and educators' progress in introducing, adapting and exceeding different agendas in education, requiring new forms of discipline and social adjustment.

NOTES

[1] "In September 2006, the OECD launched a new Entrepreneurship Indicators Programme (EIP) to build internationally comparable statistics on entrepreneurship and its determinants, whose aim is to create a durable, long-term, programme of policy-relevant entrepreneurship statistics. As such, the work involves developing standard definitions and concepts and engaging countries and international agencies in the collection of data" (Ahmad & Seymour, 2008).

2   Bassanini and Scarpetta (2001) referred to the concept of entrepreneurship as enterprising individuals who display the readiness to take risks with new or innovative ideas to generate new products or services.
3   Upper Secondary School advanced Level (stx, htx, hhx and The Higher Preparatory Examination (hf) – dominated by students at 16 – 19-years old), but primarily to students studying social science.

REFERENCES

Ahmad, N., & Seymour, R. G. (2008). *Defining entrepreneurial activity: Definitions supporting frameworks for data collection*, OECD Statistics Working Paper 2008/1). Paris: OECD. Retrieved February 15, 2015 from http://www.oecd.org/std/definingentrepreneurialactivitydefinitionssupportingframeworksfordatacollection.htm

Amabile, T. M. (1983). *The social psychology of creativity*. New York, NY: Springer Verlag.

Amabile, T. M. (1996). *Creativity in context: Update to "The social psychology of creativity"*. Boulder, CO: Westveiw.

Apple, M. W. (1971). The hidden curriculum and the nature of conflict. *Interchange*, *2*(4), 27–40.

Bassanini., & Scarpetta. (2001). The driving forces of economic growth: Panel data evidence for the OECD countries. *OECD Economic Studies*, *33*(2), 9–56.

Clark, J. (2015). Philosophy, neuroscience and education. *Educational Philosophy and Theory*, *47*(1), 36–46.

Csikszentmihalyi, M. (1988). Society, culture and person: A systems view of creativity. In R. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives*. New York, NY: Cambridge University Press.

Csikszentmihalyi, M. (1997). *Creativity: The flow and the psychology of discovery and invention*. New York, NY: Harper Perennial.

Csikszentmihalyi, M. (1999), Implications of a systems perspective for the study of creativity. In R. Sternberg (Ed.), *Handbook of creativity*. Cambridge, UK: Cambridge University Press.

Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Orlando, FL: Harcourt.

Dewey, J. (1920). *How we think*. Boston, MA: Heath

Dewey, J. (1938). *Experience and education: Kappa Delta Pi*. New York, NY: Touchstone edition

Ford, C. M. (1996). A theory of individual creative action in multiple social domains. *Academy of Management Review*, *21*(4), 112–1142.

Gardner, H. (1991). *The unschooled mind: How children think and how schools should teach*. New York, NY: Basic Books

Jackson, P. W. (1968). *Life in classrooms*. New York, NY: Holt, Rinehart, & Winston.

Jensen, T. W., & Skov, M. (2007). Følelser og kognition, en indledning. In T. W. Jensen & M. Skov (Eds.), *Følelser og kognition*. Copenhagen: Museum Tusculanums Forlag

Lankoski, P. (2007). Goals, affects, and empathy in games. *Philosophy of computer games*.

Liljestrom, A., Roulston, K., & deMarrais, K. (2007). There's no place for feeling like this in the workplace: Woman teachers' anger in school settings. In P. A. Schutz & R. Perkrun (Eds.), *Emotion in education*. Amsterdam, The Netherlands: Elsevier Science.

Lund, B. (2010). Innovation strategies in school. In K. Skogen (Ed.), *Creativity and innovation: Preconditions for entrepreneurial education*. Trondheim: Tapir Akademisk Forlag

Meyer, D. K., & Turner, J. C. (2007). Scaffolding emotions in classrooms. In P. A. Schutz & R. Perkrun (Eds.), *Emotion in education*. Oxford, UK: Elsevier Science

Ministeriet for Videnskab, Teknologi og Udvikling. (2010). *Strategi for uddannelse I entreprenørskab*. Retrieved February 15, 2015 from http://ufm.dk/publikationer/2010/filer-2010/strategi-for-entreprenoerskab.pdf

Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of management review*, *21*(4), 986–1010.

New & Improved. (2004). Managing emotions to foster innovation. *The innovative brain: A new and improved newsletter*. Retrieved February 15, 2015 from http://www.newandimproved.com/newsletter/1125.php

Newell, A., Shaw, J. C., & Simon, H. A. (1962). The processes of creative thinking. In H. E. Gruber, G. Terrell, & M. Wertheimer (Eds.), *Contemporary approaches to creative thinking*. New York, NY: Atherton Press

Nordisk Ministerråd. (2011). *Kreativitet, innovation og entreprenørskab i de nordiske uddannelsessystemer – fra politiske hensigtserklæringer til praktisk handling*. (No. ANP 2011:706). Copenhagen: Mandag Morgen. Retrieved February 15, 2015, from www.cko.dk/sites/default/files/kreativitet_innovation_og_entreprenoerskab_i_de_nordiske_uddannelsessystemer.pdf

Ottesen, E., Lund, B., Grams, S., Aas, M., & Prøitz, T. S. (2013). Educational methods as commodities within European education: A Norwegian–Danish case. *European Educational Research Journal*, *12*(4), 463–479

Pekrun, R. (2007). The control-value theory of achievement emotions: An integrative approach to emotions in education. In P. A. Schutz & R. Perkrun (Eds.), *Emotion in Education*. San Diego, CA: Elsevier Science.

Runco, M. A. (2007). *Creativity: Theories and themes: Research, development, and practice*. Amsterdam, The Netherlands: Elsevier.

Runco, M. A. (2014). *Creativity: Theories and themes: Reseach, development, and practice*. Burlington, MA: Elsevier.

Sawyer, R. K. (2006). *Explaining creativity – the science of human innovation*. Oxford, Uk: University Press.

Schutz, P. A. (2007). Teacher identities, beliefs and goals related to emotions in the classroom. In P. A. Schutz & R. Perkrun (Eds.), *Emotion in Education*. San Diego, CA: Elsevier Science.

Searle, J. R. (1984). *Minds, brains, and science*. Cambridge, MA: Harvard University Press.

Sternberg, R. (2006). The nature of creativity. *Creativity Research Journal*, *18*(1), 87–98.

The glossary of Education reform. (2014). *Student engagement*. Retrieved February 15, 2015 from http://edglossary.org/student-engagement/

The Oslo Agenda for Entrepreneurship Education in Europe. (2006). *Entrepreneurship education in Europe: Fostering entrepreneurial mindsets through education and learning, Final report*. Retrieved February 15, 2015 from ec.europa.eu/enterprise/policies/sme/files/ support_measures/ training_education/doc/oslo_report_final_2006_en.pdf

U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs. (2003). Identifying and treating attention deficit hyperactivity disorder: A resource for school and home. Washington, DC: Author.

Zembylas, M. (2003). Emotions and teacher identity: A poststructural perspective. *Teachers and Teaching: Theory and Practice*, *9*(3), 213–238

Zembylas, M. (2007). The power of politics of emotions in teaching. In P. A. Schutz & R. Perkrun (Eds.), *Emotion in education*. San Diego, CA: Elsevier Science.

Birthe Lund
Department of Learning and Philosophy
Aalborg University
Denmark

TATIANA CHEMI AND JULIE BORUP JENSEN

2. EMOTIONS AND LEARNING IN ARTS-BASED PRACTICES OF EDUCATIONAL INNOVATION

ABSTRACT

The present chapter addresses the topic of educators' emotions in teaching situations when they experiment with and apply arts-based tools to learning and facilitation. Original data are drawn from a qualitative study that observed and described an innovative arts-based development project at a Danish University College. The study is based on the educators' perspective and sheds light on what makes their commitment to pedagogical innovations satisfying or challenging. The educators in this study explored arts-based approaches that were new to them, but they volunteered because of their existing interest in the arts and arts-based learning. The specific focus on the arts brought to our attention issues of bodily, sensory and mediated expression in relation to emotions and learning.

KEYWORDS: Educators' emotions, Emotions in learning, Arts-based, Educational Innovation

EMOTIONS IN HIGHER EDUCATION

This chapter will address emotions in educational settings from the perspective of the educator in higher education. Most of the literature addresses adult learning from the perspective of the learner. Here, we find several approaches. Much research focuses on adult learners and their motivation for engaging in further education and life-long learning (Illeris, 2009; Mezirow, 2010), or on the relation between adult learners and social meaning, which involves the cognitive, sensory and emotional dimensions (Jarvis, 2012), or the experience of self-efficacy and the effects on adult learners' emotional assessment of the learning situation (Bandura, 1977, 1997; Gallagher, 2008). Several studies focusing on emotions in educational settings in higher education look mainly at students, indicating the impact and importance of socio-cultural dynamics of the environment on individual experience of emotion (Clayton et al., 2009). Within educational settings, reward and acknowledgement are socio-cultural dynamics that influence students' emotions and feelings. As Clayton et al. (2009) state, using Bourdieu's terminology, the tension or continuum between "ennobling" or "stigmatising" individuals determines the emotional response of the

students, which is apparent in reactions such as being relieved by finishing a task, being proud of a good result etc. The above ways of studying emotions with focus on the learner/student at the centre often do not take the impact of the educator's emotions in the teaching situation into sufficient account. This is understandable given the general lack of attention to the study of emotions (Damasio, 1999).

In the last twenty years, several scientific fields, such as psychology, neuroscience and cognitive science have been looking at emotions with growing interest. Pedagogical and educational domains are still pioneering their specific focus on emotions, supported by encouraging findings that strongly suggest a central role for emotions in learning processes (Immordino-Yang & Damasio, 2007; Immordino-Yang & Fischer, 2009). In leadership and managerial research, too, there is inspiration to move in this direction. The connection between adult learners and emotions is investigated because managing emotions and feelings in organisations has been proved to be of great importance (Bierema, 2008). In this kind of research however, attention is often drawn to the emotions' role in enhancing organisational performance and to disciplining employees, rather than to promoting employee learning and empowerment. The consequence of the former could result in employees being required to display feelings that might be inconsistent with their authentic feelings in given situations (Bierema, 2008). However, the focus on employees managing their feelings in relations with customers could be relevant for educators, inasmuch as educators and employees share the question: how can we learn to take into account our own feelings and "use" them in ways that are authentic and appropriate at the same time?

The topic of adult learning and emotions poses several questions. First of all, there seems to be a lack of attention to educators and the impact of their emotional responses to what happens in teaching. There are hidden issues relating to the feelings attached to the work task itself – how are the educators' emotions and feelings expressed, dealt with and enacted, if at all, in teaching? Is the professional developmental task for educators actually to develop and emphasise the experience of emotions and feelings in the work of teaching, and to develop "gut feeling" of emotional involvement in relation to professional tasks and work?

The purpose of the present chapter is to address a clear challenge in the field of higher education: the lack of knowledge about the role of emotions in educators' teaching and learning. Research on emotions and learning is growing rich with contributions, as we saw above. However, this research is to a large extent focused on the learner and less on the educator or facilitator of learning activities. We assume that the emotions of educators or facilitators have equally significant impacts on learning environments as those of learners, especially if the learning environment is expected to change by means of educational innovation carried out by the educators. Specifically, we address the educators' emotional responses when they are expected to relate to new, creative methods and subject matter in their profession, which may put them in the role of learners themselves.

We conceptualise emotions as contributing to learning processes and creativity within new cognition research (Johnson, 2007) and the neurobiology of emotions (Damasio, 1999) by focusing on a holistic take on emotions and feelings as complex intertwined phenomena. In our study we look at positively-felt emotions and the positive role of negatively-felt emotions in learning. Specifically, our original empirical data contribute to describing how educators at higher education level respond emotionally to an arts-based learning environment and to the challenge of having to apply their acquired learning to their daily practice. Similar to Grams and Jurowetzky in this book (see Chapter Five), the educators' emotions interplaying with the students' will be the specific content of the analysis of data below. However, our focus is not on educators' well-being and the significance of this for student learning like Grams and Jurowetzky, but rather on arts' role in facilitating and expressing feelings within the pedagogical, educational setting. In other words: We were curious about the role of the arts in their learning and we investigated the relationship between arts-based learning processes and emotions/feelings in this context. A more precise and qualitative description of this relationship is needed, which is the aim of this chapter.

A LONG JOURNEY TO EMOTIONS

The importance of emotions in education emerged in our action research project Arts-Based Innovation (ABI), covering the period 2011–2014. Although the study was originally conceived as an enquiry into creativity and educational innovation, the empirical data collected happened to embrace a very strong emotional response to the arts-based experimentation. As we became aware of the lack of contributions focussing on the educators' emotional perspective, we directed our qualitative interviews and observations towards exploring the phenomenology of this topic. We therefore modified our initial research design to include empirical data on the emotional response and its relationship to learning, with specific reference to the arts and creativity.

Participants in the project were social education studies educators at University College North Jutland (UCN). Also, some students and users (children, parents, peers) from institutions in North Jutland were indirectly involved as customers or end-users of the arts-based facilitation tested by UCN educators as part of their training. The project was about experimenting with arts-based tools for teaching, facilitating and learning, and envisioning ways of applying these tools to the classroom and to outreach activities. The special focus of ABI was arts-based reflection and learning on the one hand, and innovation processes and development of knowledge in the social education profession on the other. During the project, it turned out that feelings and emotions play a significant role when experienced educators and researchers are experimenting with new teaching and research methods that involve the arts. The project also shed light on the role of emotions

and feelings in connection with educators' learning opportunities and development of pedagogy and educational design.

Back in 2011 when the project began, educators at UCN initially were interested in educational and organisational innovation by means of an arts-based coaching tool, called Arts-Based Coaching (ABC). Arts-based coaching was seen as an opportunity for innovating the social educators' profession and as a method that could offer a creative approach to development in the profession. Project ABC-U (Chemi, 2011, 2013) took place over two semesters, where participants met regularly and shared experiences with arts-based learning, practice and reflections. During this time, the participating educators became increasingly involved with Theory U (Scharmer, 2000) and its emphasis on emotions and senses in innovation processes. The results of ABC–U raised new questions, which changed the project from a developmental main objective of professional innovation into an action research design, with a focus on developing knowledge and theory, but driven by participants (educators, students, management and researchers). The wonderings were a driver and a motivation for the educators to learn more about the relations between learning and innovation, when arts are involved in the development of teaching. This was the basis for the ABI project.

This chapter focuses on the project findings that describe the emotions involved in the educators' own learning processes as they experiment with teaching and facilitation, using arts-based approaches and methods. In order to study the emotional dimensions of the educators' learning processes in innovative teaching processes, it has been vital for us, as researchers, to follow their experiments closely. When educators are experimenting with new forms of teaching, research also has to be experimental and innovative, especially in order to encompass emotional factors of the innovative processes. This has been the main argument for the action research approach to the ABI project (Brydon-Miller et al., 2011; Beyes & Steyaert, 2011).

In this project, action research meant that we, as researchers, studied the field of teaching in collaboration with the social education educators. The collaborative dimension meant that the participating educators were defined as "co-researchers" (McCormack, 2007). These roles were chosen because the educators were the ones carrying out the actual arts-based teaching experiments, and therefore were able to document and express own responses to their experiments, including emotional responses. In ABI, the educators co-researched by keeping a log with educational planning, descriptions and reflections. This documentation was then brought into play within workshops, i.e. the project's scheduled, researcher-facilitated discussions in study groups. The use of logs and study groups is a common method for action research, when the purpose is to create new knowledge about social and individual change processes in practice (practice research) or professional knowledge (professional research) (Svensson, 2010, Jensen, 2012). For the sake of their own learning and experience, the participating educators collected observations of students' reactions to the arts-based methods, or they briefly asked the students for

feedback in relation to the arts-based activities. This was systematically documented and collected in different types of files, and was also shared and discussed in the study group meetings.

Our starting point has been that educators and researchers share a common curiosity and interest in studying emotional aspects of learning processes involved in educational innovation. This interest has been studied from two angles: by the educators, experimenting and documenting when teaching social education students, and by researchers using theoretical analysis and examination of empirical data (data from real-life situations). Our data was partially collected by the co-researching educators, who wrote schedules, pedagogical planning, logs and reflections and put them into a common file sharing system. In addition, data was collected and documented by audio recording dialogical group conversations (study groups) and in one case by field observation. In this way, the project's data collection not only created research data, but also created a foundation for knowledge sharing, reflection and creation of new knowledge in the action research study group. This creation of new knowledge was continually rooted in educational practice. In this way, the educators' local and specific experience with their own emotions involved in using arts-based methods encountered the researchers' more general and theoretical knowledge of emotions in innovative teaching practices (Berg & Eikeland, 2008). On this basis, our dialogue created common knowledge.

In addition, we also collected data through observation, group interviews and focus group interviews. These were in some cases supported by arts-based methods, which in turn were based on an action research process. Interest in and reflection on shared knowledge are fundamental to the development of knowledge (Jensen, 2012; Svensson, 2010).

RIDING THE ARTS-BASED CART

Including the creation of works of art in educational innovation and research within the ABI project was inspired by basically two approaches: Arts-Based Coaching and Theory U.

Arts-Based Coaching (ABC) is an arts-based method for the coaching of individuals or groups. According to this method (Chemi, 2006; Knill, Barba, & Fuchs, 1995; Knill, Levine, & Levine, 2005), the coaching session, whose purpose is to provide help to a help-seeker, starts with an informal greeting between coach and client (filling in). Subsequently, the client experiences artistic decentering, i.e. an arts-based experience that is different from ordinary reality, which involves the client's lack of resources. When this engaging, emotional, value-laden and symbolic experience ends, the client analyses both the artwork and the artistic process, during an artistic critique. Finally, the coach helps to build a bridge between the symbolic experience and the client's life and challenges. The session ends with a phase when the result is considered. A change has been achieved and the client is perhaps enabled

to perceive the world differently, as filled with endless and successful opportunities. This background of arts-based coaching was the context for the innovative educational enterprise engaged in by the University College. Educators, in their role as learners, acquired knowledge and practical experience of the ABC method and were asked, as educators, to implement the arts-based learning in their educational work. This took place in two areas: one, in the classroom with undergraduate students, the other, with external customers in the case of out-reach activities where educators were facilitators of arts-based processes.

The ABI-project also operated with a special focus on innovation, as the ABC method was anchored to a systemic understanding of innovation, namely, Otto Scharmer's Theory U (Scharmer, 2000; Senge et al., 2007). This perspective was brought into the project by the two consultants (one external and one internal) in charge of developing and implementing the arts-based course for educators. The participating educators saw it as a highly inspirational and emotionally engaging framework for understanding their work. It is therefore useful to briefly mention Scharmer's main ideas here, as they shed light on the educators' ways of creating meaning in the project. According to Scharmer (2000), individuals and organisations, even when trying to generate innovation, often use old information within existing limits and routines. This process of finding solutions based on old knowledge is called downloading. Consequent behavioural patterns produce a result that is quick, convenient and clear, but not necessarily new or innovative. Instead, organisations or individual learners should engage in a deeper learning journey based on the individual's emotional and bodily presence and collective co-creation. This can be achieved by engaging the senses (seeing, sensing) and a mindful presence (pre-sencing). When individuals or groups create together, engaging the senses and mindful presence, they often experience a greater drive to crystallise their thoughts on possible modes of action. A rapid prototype of the crystallised actions can be taken as the basis for genuinely innovative solutions (performance). The starting point for integrating Theory U with arts-based coaching was, in the ABI project, Scharmer's concept of sensing, which sets the stage for the arts-initiated learning processes.

The arguments for this integration are several:

- The arts capture and communicate the complexity of human experience, knowledge and cultural community that may otherwise be difficult to access for linguistic articulation, simply because the arts engage alternative communication forms that are emotion-related, embodied, sensory, metaphorical, symbolic.
- The arts engage people and get the individual to notice things in new ways – that is, images can help the individual to see even familiar objects and problems with fresh eyes, hence new-thinking to be used in innovation projects.
- Art literally aids people to look upon phenomena with the eyes of others, see them from different perspectives and unusual points of view (Cole & Knowles, 2008; Eisner, 2008; Langer, 1953, 1961; Weber, 2008).

• In this way, when the participating educators were innovating teaching practice, art was able to direct them towards new thinking and to discourage (too much) downloading of old knowledge.

In this project, the arts have also been used as support and validation within an action research framework, as inspiration and tools for research shared between participants and researchers. This approach can be described as arts-based research (Knowles & Cole, 2008) and corresponds with both Scharmer's Theory U and the ABC method, with their background of sensory, embodied experimentation and symbolisation. The arts within the action research framework have have been a fruitful perspective on the teaching and learning practices that educators and students in the project were trying to innovate. This approach ended up building a meaningful bridge between the newly acquired arts-based learning and experiences on the one hand and the research documentation and reflection on the other. The consequence, relevant in relation to innovation processes in education, has been integration of theoretical and conceptual knowledge with bodily, action-oriented and value-based knowledge. As we shall see later, this innovation perspective of bringing the arts into teaching practice sheds light on the complexity of educators' emotions, as evoked by experiments with the arts.

THE CHALLENGES OF ARTS-BASED EXPERIMENTATION

For analytical purposes we have clustered the emotions mentioned in the data material as positive and negative, differentiating the students' and the educators' emotions. By positive and negative, we intend what the educators and students themselves perceived and articulated as problematic or energy-giving, in other words, their subjective perception of their own experiences (Sutton, 2007, p. 261). This being said, we are aware that a sharp dualism does not exist in reality, between positivity and negativity in affective domains. Affective valence, that is the intrinsic value that individuals give to their emotional experience, is context-related and situational, as Damasio (1999) emphasises. However, our intention in clustering the emotional utterances and expressions in this way, is to unfold the emotional complexity of the educators' responses, which derives from the challenges of engaging in educational innovation. In our case, this was achieved by the development of arts-based learning environments for students, and by the effort of presenting the arts-based activities in an accessible way.

Similarly, the division of the emotions between students and educators is also fictitious, but serves analytical purposes. In reality, much of the educators' own positive or negative emotional state is directly influenced by the students' perception of teaching and student output.

In general, the findings of this study seem comparable to those of other similar change processes involving emotions. In our observations and interviews the educators express frustration as well as motivation and joy when going through

processes involving art making or the senses, as for instance in LEGO-facilitated reflection[1]. On closer examination, however, what stands out from the data collected is that emotions seemed to be surprisingly present and articulated in the participating educators' experience. They were clearly expressed in the interviews by means of a discourse with positive affective valence and consistently observed in engaged behaviours and attitudes (high level of arousal and motivation, fun, joy, playfulness). The experience with arts-based tools seemed to be specifically characterised by meaningfulness and appropriateness to the context. The educators recurrently emphasised this point. To them, experimenting with arts-based teaching and facilitating methods seemed to be an almost natural development of previous skills and a long-wished-for activity. At the same time, the arts-based processes were not compulsory for students and participants: they volunteered. The fact that quite a few students and professionals actually still do volunteer indicates that the arts involvement positively attracts and motivates these specific participants, suggesting awakening of positive emotions like happiness, engagement, and meaning (Gabriele, 2008). We may assume that this positive attraction and motivation affect the educators in ways that allow them to be emotionally involved in positive ways, which we read from expressions like "I feel as if I'm finding an answer to this because it touches me". These two complementary aspects – the positive attraction felt by students and professionals to arts-based processes and the positive curiosity of educators – indicate a link between art and feelings for the educators (for the relation between student emotion display and educators' emotional response and display see also Hagenauer & Volet, 2014). The relational power of aesthetic learning processes ("I can relate myself to the feeling you have") and the feeling of becoming better in putting feelings into words is stressed. But feelings are not the educators' main focus – this is not what the development project is about. They are aware that the method itself has to do with emotions through the arts, which is clear, for instance, in the emotional power of metaphors and artefacts or in experiential participation in the arts. Introspection, artistic seduction, first-hand participation, reflection through metaphors, sharing in a secret community of practice are mentioned and looked upon positively.

According to the participating educators, what is special in the use of the arts is their materiality, the aesthetic challenges, the continuous process of doing and redoing, the playful and experimental approach. Aesthetic experiences seem to contribute to building up a language and vocabulary that are resources-based, strengths-focused (what worked, what was surprising, what helped the individual in the process of art-making) and that make conscious use of metaphors and pictures. The UCN educators expressed themselves in terms of artistic modality awareness, for instance:

> [the artistic] modality was appropriate, I think. The process went well despite the aforementioned confusion. This joint work had been given much thought

by the participants and seemed to be central in their learning. It was good we had three rounds [of artistic feedback] where [the participants] could move each other's stuff around. One said that it was demoralising that the others pushed his thing around [in the art display], but he ended up by having the desire to build [his artwork] up again after a few rounds.

However, the interviews and the study groups did not provide enough data about the educators' level of awareness regarding emotions in artistic learning processes. In the development project, artistic and arts-based experiences were used instrumentally for coaching purposes and not for their intrinsic learning or aesthetic potential.

When educators asked each other "what is this about?" the answers pointed at creativity and organisational change, active use of intuition, lifelong learning, identity, other alternative languages involving the senses and the body.

The educators' awareness of feelings, recurrently mentioned or hinted at, made them able to formulate what was difficult and what was exciting in the innovation process, both for themselves and for their students. The students were worried that the new arts-based approach would be an add-on to a busy day, making it unmanageable and unusable in everyday life. Besides the more general challenges, common to all collaboration-based work, the ABI project provoked creator's anxiety among the students. "Oh no! We have to be creative!" The challenges in the art-making and artistic analysis of the ABC method generated in students some of the frustrations intrinsic to artistic creative processes: anxiety about creation, frustrations when materials and media struggle against ideas and visions, nervousness about the work's reception. These emotions, though experienced with a negative valence, seemed to the students to open new learning and development possibilities. In general, the students reported to the educators a positive feedback, due specifically to the project's positive energy and a feeling of safety and ease, in spite of the challenges. Students particularly appreciated the co-creational dimension ("doing things together") and active participation in the learning process ("We have to find out ourselves"), but also the different educational frames that allowed for unexpected elements to emerge ("surprise in free frames, free thoughts"), building their new creative identity ("I didn't imagine I was so creative"), an experiential and active approach ("I didn't think too much – I just did it").

As far as the educators were concerned, the emotions they indicated as negative or with negative valence were of wider range and could not always be converted into positive thoughts or behaviours. Among recurring references was the anxiety of not being able to plan the arts-based facilitation or teaching thoroughly. The insecurity and fear that emerged from experimenting with a new pedagogical method only got worse when the educators had to deal with sustained creative expectations. There was exhaustion after sustained reflection on the focused arts-based work ("I am not sure my brain can work anymore today") or awareness that "all innovation is dangerous" and that creative changes take time and effort:

> [The daily tasks] must be out of the way so that I can think creatively […]
> I think it's hard to make time to think creatively in everyday life, if you are
> stressed or if you have so many other things that you have no energy left.

Both students and educators felt that everyday busy routines seriously challenged
new thinking, creativity and innovation in educational settings. We suppose that this
pressure is even stronger when the new methods applied are based on the arts, because
artistic work, metaphor building and language are not direct or straightforward.
Also, the arts in education demand strong advocacy. In educational contexts that are
increasingly focused on accountability and tests, the arts or arts-based methods need
to be defended and justified. Emotionally, the educators feel this pressure when they
mention their concern regarding scientific documentation of their work on audio files
("now we must say something clever"), as if the documentation, instead of serving a
scientific purpose, might be used for accountability strategies. This pressure also, and
even more relevantly, derives from fear of their colleagues' judgment – colleagues
not involved in the arts-based project might look on it as "hula-hoop pedagogy" and
doubt the seriousness of the method or the effort put into it.

There are also worries about content-related issues that are specific to the
application of the arts in learning and facilitation. The educators are concerned with
the downloading trap, that is – in Scharmer's terms – the illusion of developing
something new, while in fact repeating old models. At the same time, they believe
that their pedagogical innovation shouldn't be "just cosy" but include plenty of
artistic content. Then follows the major concern, which is that "aesthetic analysis
is difficult" and that the arts, or the use of them in learning and facilitation, raise
a considerable number of dilemmas. Is using the arts in learning and facilitation a
form of manipulation, because the educator/facilitator has "a hidden agenda"? How
to keep a process open to what is emerging and unfold the artistic work structure?
Does the facilitator need to be an expert in the artistic modality chosen or not? The
ABI project offered a very complex role for educators. They tried out and trained
their skills as facilitators and at the same time had to think how they could transfer
these skills to their teaching. They were contemporaneously arts-based facilitators
for customers outside the educational institution, supervisors of students' arts-based
projects and educational developers of arts-based tools. How did they deal with
this complexity? One strategy as outreach facilitators was to ignore the negative
challenges altogether. Another, more active strategy was to use past knowledge and
experiences from other contexts, e.g. their teaching and supervision competencies,
and transfer them to the new context. In their own words, educators cultivated
aesthetic skills (analysis of art works, role play, observation and attention), active
listening skills and facilitating/supervising skills. Moreover, some of them told us
that their preparation for the arts-based task did not focus exclusively on professional
content (knowledge of the field, about the target group to facilitate/teach, about
theories), but also cultivated an affective-motivational side, which included positive

emotions. There were positive expectations as to the results of the process, intuitive knowledge perhaps from listening to hints, a generally positive attitude embracing relaxation, engagement, enjoyment and openness. On one hand, the educators were aware that "one should have some skills to fully enjoy the flow in these [arts-based] activities". On the other, they experienced that educators should cultivate a positive attitude, as the process "demands a lot of energy". The process does clearly require a strong psycho-emotional disposition (Tishman & Jay, 1993) towards learning and awareness.

POSITIVITY AND THE ARTS

From field observation we noticed a mostly positive response to the arts-based developmental project, with dynamic collaborative relationships, an appreciative approach, a feeling of safety in expressing feelings through metaphors (also when visualising fears) and an overall "lightness" of atmosphere. The educators reported a large range of positive affects: fun was the most frequently mentioned emotion ("It's going to be fun", "it's fun", "it's cosy") but also satisfaction with the project's results. This might be understood both as a biological reaction to pleasurable stimuli (the arts that the educators are passionate about) and as a psycho-cultural response to the successful output of the project. This helped to build a positive professional identity and learn skills perceived as needed and meaningful to the educational task.

The educators' positive affective valence seems to be strongly reactive to the students' perception and achieved learning. It occurs when educators become acquainted with the students' learning and when students give them positive feedback. Educators are specific about what makes them happy and satisfied: when students learn to understand, when they think in new ways and out of the box, when they can use the learning acquired, when they are or become passionate about learning or the subject, when they receive inspiration from each other. Sometimes the educators notice that the students listen to each other, say that the project is exciting or engaging, or clearly show engagement. In this case the educator's perception of positive emotional states rises. Clearly, success in engaging students is extremely relevant for the educators' own emotional perception of the teaching situation. We suggest that this is one of the main influences on the educators' affective valence regarding teaching and facilitation. However, further study is needed to explore this relationship.

When invited to describe and evaluate the arts-based project, the educators responded that it was basically about: inspiration and usefulness (*ergo*, basically about creativity: see a consensual definition of creativity in Feist, 2010, p. 114), equality between educators and students, about listening to each other, tenacity and perseverance in experimentation, new perspectives, immersion in engagement

and passion, passion about learning and arts-based tools. Immersion was achieved, they said, by means of fixed frames and structures, clear purposes and agenda, the reflective activity of putting into words the value of such arts-based activities, the regularity with which they met, learned and reflected in groups and in practice. As might be expected, they also mentioned that what contributed to their immersion and engagement was the extreme excitement and difficulty of the arts-based approach and the creative obstructions they had to face. This statement is not surprising in the case of creative activities, where turning hard-felt challenges into learning opportunities is one of the most common strategies (Chemi, Jensen, & Hersted, 2015). Artists often mention that, in creative processes, what at first glance appears negative or challenging can have a positive, inspiring role in the end. Rules, resistance and obstruction can turn into surprising learning and creative opportunities. What we find significant is that the educators systematically approached the arts-based experimentation creatively, which meant bringing novelty and appropriateness to their common learning process (Feist, 2010).

Last (but not least), a recurrent finding should be mentioned: the critical approach and critical questioning that educators held to, sought for and actively cultivated. Activities and experiments with arts-based approaches should not be misunderstood as *happy-go-lucky* and the educators involved in these activities should not be seen as "cheering idiots" (literal quote from interviews) by their colleagues. The artistic activities must involve seriousness, commitment and challenges: "although we would like to have control over [the project] so it will not be just smooth and 'combed', [arts-based educational design] must be a place where a lot of things happen". This seems to display the educators' concerns about eventual critiques against arts-based activities as something extra or useless.

However positive, the educators' reactions to the arts-based project also included deeply felt needs for the future of the arts-based tools in their education. They often agreed with each other that some prerequisites are necessary to the successful integration of arts-based tools in learning and facilitation: deep engagement, skills, embodied learning, clear frames from leaders (the lack of it can affect the emotions in learning process for the educators negatively). As we can see, they mention more than content matter or cognitive skills about artistic processes and they include the affective level.

CONCLUDING REMARKS AND COMMENTS

The described project examined, if and how arts-based education exploits art as a potential learning tool. In the analysis above, we found strong indications of emotional aspects of learning in students, when art is used pedagogically. Furthermore, the analysis suggests that its potential may be linked to the arts' ability to evoke emotional responses in students. This again calls for rigorous development of educators' awareness of their own emotional responses to educational occurrences in arts-based processes, for the reasons that follow.

- Art itself can evoke emotions (Eisner, 2008), which can create syntheses between forms of knowledge by connecting bodily forms of knowledge with emotions, thinking and linguistic articulation. In teaching and facilitation of learning processes, this insight can inspire increased engagement in learning, meaningfulness in learning activities and inclusion of affects in subject-matter learning in order to support personalised, experience based learning in an institutional learning environment.
- Artworks can function as emotional metaphors, forming new metaphors in the sensory encounter with the viewer and creating emotional resonances. In educational contexts, artistic work can be the students' tool for a deeper and wider understanding of the emotional aspects of own learning processes. It is also an engaging tool for dissemination of learning outputs or dilemmas. However, our analysis shows that educators, too, seem to be affected by the emotional sides to metaphors. This again calls for the educators to be aware of the role of their feelings in teaching and facilitating.
- Art emphasises own and others' bodily connectedness, through experience that would otherwise be stored in the body (Cole & Knowles, 2008; Eisner, 2008; Langer, 1961, 1969; Weber, 2008). In learning situations, where learning is "invisible", the students' work with art can contribute to making learning visible, with the possibility of displaying feelings related to this bodily-stored experience. In this externalisation and description of experience, along with emotional responses and connections to experience, the educator would appear to be emotionally at play or at stake. This must be taken into account in future research and application in practice.
- Within artistic experiences, educators seem to be especially sensitive to students' learning and positive perception of learning, to the extent of being directly reactive to the students' satisfaction. Awareness of these affective dynamics can be actively included in considerations about and planning of educational designs.

These aspects of knowledge can be seen as closely linked to emotions, since the arts have the potential to open people up to expressing, thinking about and planning actions based on emotions (Connery, John-Steiner, & Marjanovic-Shane, 2010; Moran & John-Steiner, 2003). These findings can suggest concrete tools and strategies for using arts-based tools in education. Taking them into consideration could be an initial strategy for taking emotions seriously in learning environments. Building awareness of emotions in general, own emotional responses and specific relationships between emotions and artistic expressions could be the starting point for building learning environments that value and appreciate the complex role of emotions in learning processes. The lesson learned from our analysis also suggests that educators will need special attention and awareness for emotional dynamics when experimenting with the arts in educational settings. This will require not only knowledge about the arts and their creative educational potential, but also serious

study of the foundational and philosophical attitudes of different artistic practices, towards the expression of and reflection on emotions and feelings.

We believe that our study is only the very beginning of a journey towards the understanding of educators' affects in teaching. More knowledge is needed in order to qualify and specify the above findings in other content-related contexts.

NOTE

[1] LEGO-facilitation(LEGO Serious Play) is a method for organisational learning and innovation, using LEGO-bricks as a tool for facilitating individual reflection and sharing of thoughts and ideas in groups by visualising "tacit knowledge" and embodied experience by means of the bricks (Schrage 1999).

REFERENCES

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Bandura, A. (1997). *Self-Efficacy. The exercise of control*. New York, NY: Freeman and Company.

Berg, A. M., & Eikeland, O. (2008). Organizational rationalities and change management. In A. M. Berg & O. Eikeland (Eds.), *Action research and organisation theory*. Frankfurt am Main: Peter Lang.

Beyes, T., & Steyaert, C. (2011). The ontological politics of artistic interventions: Implications for performing action research. *Action Research*, *9*(1), 100–115. doi:10.1177/1476750310396944

Bierema, L. L. (2008). Adult learning and the emotional self. In S. Imel & J. M. Ross-Gordon (Eds.), *New directions for adult and continuing learning*. New York, NY: John Wiley & sons Inc.

Brydon-Miller, M., Berthoin Antal, A., Friedman, V., & Gayá Wicks, P. (2011). The changing landscape of arts and action research. *Action Research*, *9*(1), 3–11. doi:10.1177/1476750310396405

Chemi, T. (2006). *Artbased approaches: A practical handbook to creativity at work* (1st ed.). Hillerød: Fokus.

Chemi, T. (2011, December). *At the bottom of the U: Arts-based leadership of creative learning processes in educators and social workers' raining*. Denmark: Springer.

Chemi, T. (2013). Læring i bunden af U'et: Kunstbaseret læring og processer på pædagoguddannelse. In *Dans med Fremtiden: Nye Trin til Innovation i Velfærdssektoren* (pp. 26–64). Aalborg: UCN Forlag. (UCN Seriehæfte; Nr. 6).

Chemi, T., Jensen, J., & Hersted, L. (2015). *Behind the scenes of artistic creativity: Processes of creating, learning and organising*. New York, NY: Peter Lang.

Clayton, B., Beard, C., Humberstone, B., & Wolstenholme, C. (2009). The jouissance of learning: Evolutionary musings on the pleasures of learning in hogher education. *Teaching in Higher Education*, *14*(4), 375–386.

Cole, A. L., & Knowles, J. G. (2008). Arts-informed research. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (1st ed., pp. 55–70). Thousand Oaks, CA: Sage Publications Inc.

Connery, M.C., John-Steiner, V., & Marjanovic-Shane, A. (2010). *Vygotsky and creativity: A cultural-historical approach to play, meaning making and the art*. New York, NY: P. Lang.

Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Orlando, FL: Harcourt.

Dans med fremtiden. (2011). Aalborg: University College Nordjylland.

Eisner, E. (2008). Art and knowledge. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of arts in qualitative research: Perspectives, methodologies, examples, and issues*. Thousand Oaks, CA: SAGE Publications Inc.

Feist, G. J. (2010). The function of personality in creativity: The nature of the creative personality. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 113–131). Cambridge, UK: Cambridge University Press.

Gabriele, R. (2008). Orientations to happiness: Do they make a difference in a student's educational life? *American Secondary Education*, *36*(2), 88–101.

Gallagher, M. W. (2012). Self-efficacy. *Encyclopedia of psychology*, *2*, 314–320.

Hagenauer, G., & Volet, S. E. (2014). I don't hide my feelings, even though I try to: Insight into teacher educator emotion display. *Austrian Educational Research*, *41*, 261–281

Illeris, K. (2009). *Contemporary theories of learning: Learning theorists. in their own words*. London, England: Routledge

Immordino-Yang, M. H., & Damasio, A. (2007). We feel, therefore we learn: The relevance of affective and social neuroscience to education. In *Journal Compilation: International Mind, Brain, and Education Society* (pp. 3–10). Oxford, UK: Blackwell Publishing.

Immordino-Yang, M. H., & Fischer, K. W. (2009). Neuroscience bases of learning. In V. G. Aukrust (Ed.), *International encyclopedia of education: Section on learning and cognition*. Oxford, UK: Elsevier.

Jarvis, P. (2012). Learning from everyday life. *HSSRP*, *I*(1), 1–20.

Jensen, J. (2012). Musik, kunst og æstetisk læring. I: G. Duus (red.), *Aktionsforskning. En grundbog*. København: Samfundslitteratur.

Johnson, M. (2007). *The meaning of the body: Aesthetics of human understanding*. Chicago, IL: Chicago University Press.

Knill, P. J., Barba, H. N., & Fuchs, M. N. (1995). *Minstrels of soul: Intermodal expressive therapy*. Toronto, ON: Palmerston Press.

Knill, P. J., Levine, E. G., & Levine, S. K. (2005). *Principles and practice of expressive arts therapy: Toward a therapeutic aesthetics*. London, UK: Jessica Kingsley Pub.

Knowles, J. G., & Cole, A. L. (2008). Handbook of the arts in qualitative research. Los Angeles, CA: Sage.

Langer, S. K. (1953). *Feeling and form*. London, England: Routledge & Kegan.

Langer, S. K. (1961). *Reflections on art: A source book of writings by artists, critics and philosophers*. Oxford, UK: Oxford University Press.

McCormack, B., Henderson, E., Boomer, C., Collin, I., & Robinson, D. (2008). Participating in a collaborative action learning set (CAL): Beginning the journey. *Action Learning: Research and Practice*, *5*(1), 5–19. doi:http://dx.doi.org/10.1080/14767330701880184

Mezirow, J. (2010). Transformative learning theory. In J. Mezirow & E. W. Taylor and Associates (Eds.), *Transformative learning in practice: Insights from community, workplace and higher education* (1st ed., pp. 18–31). San Francisco, CA: Jossey-Bass.

Moran, S., & John-Steiner, V. (2003) Creativity in the making: Vygotsky's contemporary contribution to the dialectic of development and creativity. In: R. K. Sawyer, V. John-Steiner, S. Moran, R. J. Sternberg, D. H. Feldman, J. Nakamura & M. Csikszentmihalyi (Eds.), *Creativity and development* (pp. 61–91). New York, NY: Oxford University Press.

Scharmer, O. (2000). *Presencing: Learning from the future as it emerges. On the tacit dimension of leading revolutionary change*. Finland: Helsinki School of Economics.

Schrage, M. (1999). *Serious play: How the world's best companies simulate to innovate*. Cambridge, UK: Presidents and Fellows of Harvard College.

Senge, P., Scharmer, O., Jaworski, J., & Flowers, B. (2007). *Presence: Exploring profound change in people, organizations and society*. London: Nicholas Brealey Publishing.

Sutton, R. E. (2007). Educator's anger, frustration and self-regulation. In P. A. Schulz & R. Pechrun (Eds.), *Emotion in education*. Burlington, MA: Academic Press, Elsevier Inc.

Svensson, L. G. (2010). Professions, Organizations, Collegiality and Accountability. In L. G. Svensson & J. Evetts (Eds.), *Sociology of professions: Continental and anglo-saxon traditions*. Göteborg: Daidalos.

Tishman, S., & Jay, E. (1993). Teaching thinking dispositions: From transmission to enculturation. *Theory Into Practice*, *32*(3), 147.

Weber, S. (2008). Visual images in research. In J. G. Knowles & A. L. Cole (Eds.), *Handbook of the arts in qualitative research* (1st ed., pp. 41–53). Thousand Oaks, CA: Sage Publications Inc.

Tatiana Chemi
Department of Learning and Philosophy
Aalborg University

Julie Borup Jensen
Department of Learning and Philosophy
Aalborg University