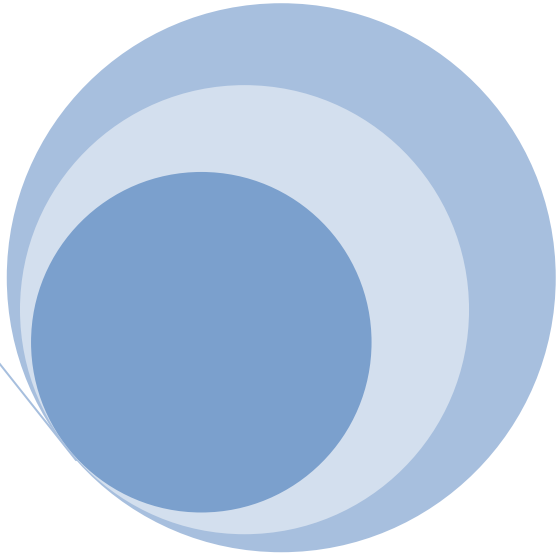
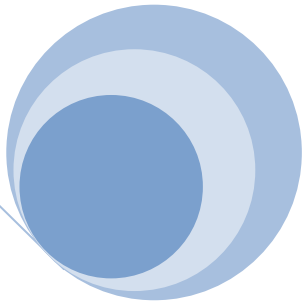
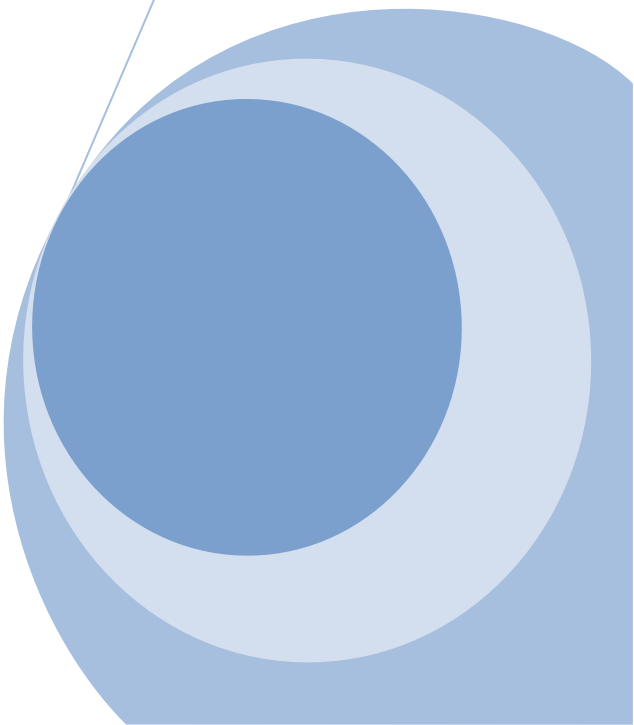




The Elephant in the Classroom

Douglas P. Newton PhD DSc
School of Education, Durham University, UK



Carpenter, gardener and teacher

Le Curé in Joanne Harris's book, *Peaches for Monsieur le Curé* (Transworld, 2013: 522), believing he would lose his position, thought, 'If that means giving up the Church, so be it, *pere*, I'll start again. Perhaps try my hand at carpentry, or gardening, or teaching'. Now carpentry, gardening and teaching all need skills but those in teaching are different. Carpenters and gardeners work with passive wood and submissive plants. Teachers, however, work with lively students and minds often ruled by, as T.S. Eliot put it, undisciplined squads of emotions. Everyone outside the classroom knows that we are emotional creatures and emotions are powerful shapers of behaviour ranging from who we marry to which shoes we buy. In the classroom, it is no different. Moods and emotions push students around and decide just how successful or unsuccessful they will be. Despite this, far more effort generally goes into planning food for the intellect than into how it is digested. How - even if - that food is digested depends a lot on how students feel about it.

Most of us suspect that emotions can be bad for thought. What I hope to do in this article is show that emotions can indeed be bad for thought *but* they can also support and sustain it, provided they are the right ones at the right time. In addition, I hope to show that they can shape thinking in ways which can pass unnoticed yet still make a difference. Finally, I will conclude with what I see as some implications for teaching and opportunities for the teacher. To illustrate these effects, I will refer to some kinds of purposeful thought which are generally valued and fostered in classrooms. In particular, we have students think in order to:

- Understand
- Create
- Make choices and take decisions
- Make deductions
- Evaluate the quality of their thoughts and those of others.

To the extent that this is successful, thought is productive as opposed to reproductive, which merely recycles ideas as given.

We might see these kinds of thought as matters only for the intellect but we also have an emotional system which evolved earlier and which does its best to guard our best interests. Moods and emotions are related mental states but emotions generally refer to relatively brief responses to specific events such as the anger felt at an insult or pleasure at praise. Moods tend to last longer and are often responses to how we perceive our current state of well-being. A student who finds life in class to be an endless series of humiliating incidents is unlikely to have an enduring feeling of happiness (Oatley & Jenkins, 1996). Both moods and emotions can leave their mark upon thought.

Often very quickly and unconsciously, the emotional system appraises situations, checking them for threats to and support for our needs, beliefs, values and goals (Freeman, 2000). If it finds a threat, it is likely to generate disappointment, sadness, anxiety, even anger; if it finds support, there are likely to be feelings of anticipation, pleasure, happiness, even euphoria. Such emotions are likely to prompt engagement or avoidance (Clore & Huntsinger, 2007). Emotional responses are sometimes believed to be irrational but they can be very rational responses to our secret, even unconscious, needs and values. If offered a job in a town far from friends, the intellectual system may decide that the salary is better and there are more

opportunities for promotion so you should take it. Meanwhile, the emotional system has weighed the opportunity against your partly unconscious need for friends and family and warns you with an emotion prompting you to reject it. At times, of course, our beliefs and values can be inappropriate. The emotional system does not question them, it simply uses them to prompt responses which, if the beliefs and values are unsound, can be maladaptive.

Productive, purposeful thoughts

Understanding and creative thinking

The two systems, one emotional and the other intellectual, operate simultaneously. Neuroscientists have found, however, that they are not isolated but have rich lines of communication between them. This means that they can and do influence thought, as in understanding and creative thinking. Here, positive moods can be helpful. Understanding is the construction of meaningful, coherent wholes from disparate items of information (Newton, 2012). Of particular importance is causal understanding which enables explanation (Piaget, 1978). Being in a good mood is known to support this process. Furthermore, when the process is failing to produce an understanding, those in a positive frame of mind are more likely to widen their thinking and find additional information to overcome the difficulty (Clore & Palmer, 2009; Gaspar & Zawadzki, 2012). Topics with emotive content tend to be processed more deeply: in narratives about people, empathy also helps students adopt their goals and construct causal explanations of their behaviours (Bourg et al., 1993; Ames at al., 2008).

Creative thinking, constructing possible, alternative worlds, is not unlike building an understanding but the teacher expects the students to put more of themselves into it and construct something which is appropriate and novel, at least for the student. Popularly, creativity is commonly associated with the arts but, of course, it can occur in most areas of human endeavour. In history and the sciences, for instance, the construction of plausible explanations of events is a creative act but is often described as problem solving. Like understanding, creativity benefits from what are commonly called ‘good’ moods and emotions. Fredrickson (2004) has described these as ‘broaden and build’ states of mind. Positive moods tell the students there is no threat so they can let their minds leave the narrow track of algorithmic thinking, immerse themselves in the task, experiment, and make mistakes without unpleasant consequences. This does not mean that students in a negative mood cannot be creative but they will probably generate fewer ideas and, perhaps more importantly, be too critical too soon (Kaufmann & Vosburg, 2002).

Deduction and critical thinking

Deduction and critical thinking, more than other kinds of thinking, may be seen as ‘High Reason’ (Immordino-Yang & Damasio, 2007), the unsullied actions of pure intellect, immune from emotion. This is not always so.

Deduction is the process of inferring a consequence or conclusion from given information in an ‘If this, then this follows’ sequence. (Strictly speaking, it does not produce something new in the way that understanding and creativity do because the consequences are present in the given information and are only drawn out by the process.) An early step in deduction is to interpret the information and give it meaning. Moods can shape that interpretation so that sad or anxious students give it

negative connotations while happy students interpret it in a positive light. A parallel is in a viewer's interpretation of some seemingly unambiguous, commonplace scene in a painting by, for example, the Dutch artist, Johannes Vermeer. What is attributed to the figures can be shaped by the viewer's mood. In the same way, students in the same class build different mental pictures of an event and arrive at various conclusions. Feeling sad, however, can support careful, systematic reasoning which is a central part of deduction. Negative moods can be produced by situations which seem to offer some kind of threat. This makes people focus attention on details and think cautiously and carefully. Feeling happy indicates that there is no need to be cautious or systematic, making students less successful in complex deductive tasks (Blanchette & Richards, 2010). At times, what students have to reason about matters to them and, even in the face of irrefutable logic, they can be reluctant to abandon prior beliefs and values or accept unpalatable conclusions (e.g. Croker & Buchanan, 2011). To do so may mean that they lose face or have to make an effort to revise their existing mental structures and behaviour.

Critical thinking has the purpose of evaluating thought in order to judge its quality or improve it (Moseley et al., 2005). Some use the term to describe 'good' thinking of any kind, implying that critical thinking should be an integral part of all kinds of purposeful thought. Others pair it with creative thinking because novel ideas need to be evaluated for their appropriateness. Like creative thinking, it can also be seen as a means of promoting Western notions of democracy. It can be all of these but, here, it is treated as a distinct process aimed at judging the quality of thought. Its analysis of that thought may reveal the effects of emotions but it can, itself, interact with moods and emotions. Given that critical thinking generally calls for what Andrews and Thomson (2009: 620) call 'analytical rumination', it can benefit from slightly negative moods, as does deduction. Strong negative moods, however, can make students find fault excessively and unjustly (Efklides & Petkaki, 2005; Strain et al., 2013). Where the student has some vested interest in the content, the emotional system responds to threats and benefits in it and can bias the evaluation to reduce the threat and increase the benefit (Newton, 2014). For example, thinking critically about an idea likely to replace your own treasured thoughts, or which puts the behaviour of those you love in a negative light, or which threatens your ego, is likely to make you leap to their defence and attack the idea. In the same way, ideas which support your viewpoint are likely to be upheld which is why it can be very difficult for good, new ideas and ways of doing things to find acceptance.

Choices and decisions

So far, this illustrates that moods and emotions can support thinking. At the risk of being simplistic, positive emotions can support some kinds of thinking while negative emotions support others. In making good decisions, however, emotions are often more intimately involved.

Making choices and taking decisions is a part of successfully navigating our way through life and can be described as practical wisdom (e.g. Baltes & Staudinger, 1993; Newton, 2013; Sternberg, 2001). It can also be complex and demanding in that it involves constructing understandings, creating ways forward, weighing ethical and moral concerns in balancing the interests of self and others. As this involves personal needs, beliefs, values and goals, the central role of the emotional system, beyond its contribution to understanding and creative thinking, is evident. What we value makes

us to perceive some matters as good and others as bad and leads us to prefer or desire particular states of affairs. The emotions commonly highlight such matters and states and we might use the intellect to bring them about. (The philosopher, David Hume, saw the intellect as servant to the passions: we use our wits to achieve what we desire.) Like deciding whether to take that opportunity in another town, the emotional system plays a major role in decision making as it calls into play parts of ourselves which the intellect can be inclined to ignore. When it brings something to our attention, it would be foolish to disregard its judgment without examining the beliefs it rests on (e.g. Spicer, 2004). When actions have consequences for others, moral judgments about right and wrong behaviours are needed. Psychologists find that these judgments are made quickly and automatically by the emotional system in answer to the question, 'How do I feel about it?' (Haidt, 2002).

Motivated to think purposefully

None of these kinds of thought is likely to happen unless students find it to be in their interest to engage in it. Motivation and emotions are closely related: when the student values something in a task, or sees an opportunity to satisfy a psychological need (like curiosity, feeling competent, developing an understanding of the world) or something which is valued (as when furthering a career goal or, it has to be said, looking good in the eyes of others) he feels positive about it and engages with it – a feeling which we commonly call interest and which, in satisfying it, is generally pleasurable (Newton, 1988).

But sometimes emotions overwhelm purposeful thought

Purposeful thought is open to moods and emotions. Given the right mood or emotion, students are more likely to engage in that thought and be productive thinkers. But some students in some kinds of activity may never be in the right frame of mind. In particular, when these students must perform publicly, their emotions get the better of them and can severely obstruct their performance. Simply responding to a teacher's questions or working in a group can be sufficient to make them so anxious or embarrassed that they become incoherent or retreat into silence (Crozier & Hostettler, 2003; Rank & Frese, 2008). This can be very evident in second language learning where oral interaction is a necessary part of learning. Swain (2013) tells how an 8 year-old native speaker of Greek who was quite proficient in English tried to tell others about making a salad but did not know the word for 'cucumber'. Unconsciously, she used the Greek word and was laughed at. She was so embarrassed that she cried and, fifty years later, she still recalled the incident with discomfort. Students of all ages can find it difficult to handle a foreign language in the presence of others, being affected by something rather like stage fright (Horwitz, 2010). Krashen (1988), a pioneer in studying the 'affective filter' effect, noticed, perhaps unsurprisingly, that it also affects motivation in language learning. Test anxiety is similar and has also been known for some time. When the test outcome is of great significance to the student it can generate a strong, disabling anxiety so she does not do herself justice (Conners et al., 2009). It also tends to increase with age as the significance of tests and the awareness of that significance grows. At its worst, it can make students drop out of school (Segool et al., 2013). Students often value their public image, their ego, how parents view them, and their aspirations so performance can be a threat which generates very disabling, strong emotions. Very strong emotions in general, like anger, euphoria and depressive illness, distract attention from the task and occupy mental resources so that little is left for academic thought (Pham, 2007).

And sometimes they produce behaviours which are maladaptive
People are different and some react to events much more strongly than others. As students, their strong reactions interrupt their attention, flow of thought, attempts at recall and inferencing. Full of a mental caution, they cling to unproductive lines of thought when others would abandon them. In new situations, they tend to be slow to apply a strategy they have used successfully elsewhere (Montague, 2008). Such students benefit from a calm, organized classroom and detailed scaffolding of their thinking which slowly takes it into a variety of new situations. Some conditions, such as autism or Asperger's syndrome, produce extreme and disabling emotional reactions to the world. In effect, the clamour of daily life cannot be excluded and is so frightening that it overwhelms productive thought (Kim et al., 2012).

There can be a tendency to see able students as managing emotional matters themselves - how else could they be able students? They may, indeed, have strategies which support their intellectual and emotional processes but this is not to say that they use them to their best advantage. Such students have probably used such strategies from an early age and may do so automatically. Making such behaviours conscious and open to reflection provides an opportunity to make the most of them or improve them (Risemberg & Zimmerman, 1992). There are also students whose values and goals are not those of the teacher but are centred upon, for instance, their self and public images and standing amongst their peers. They engage in behaviour which supports such values and, in the process, come into conflict with the educational system and disrupt learning for themselves and others. Teachers, too, generally have a concern for their self and public images so that threats to them produce emotional responses which can be what the student wants or which simply exacerbate the problem. In the short term, making the practical relevance of a task explicit can catch some attention, followed quickly by some success with the task. In the longer term, values and beliefs need to be addressed (Pintrich, 1999; Boekaerts & Corno, 2005).

Taken together
Moods and emotions can contribute significantly to purposeful thinking, shaping, directing and determining the extent to which it is productive. They can also impede it and lead to failure. How students respond, however, varies with student and background culture (Rothbart, 2012) so that thinking-feeling interactions in classrooms are likely to be mixed. This, of course, is a challenge when working with students from various cultures and highlights the need for teachers to know their students well enough to make their responses fairly predictable. This account is a broad sketch pointing to some notable tendencies and ignores the finer detail. For instance, moods and emotions also affect recall from memory. Nevertheless, it is possible to draw out some of what I see as important implications for practice.

Some thoughts about practice
This leads me to highlight a number of matters for consideration, some of which I believe lurk in the back of teachers' minds but are rarely expressed.

1. **The intellect isn't everything.** While success in thinking and learning benefits from the intellect, the intellect is not the only player in the game. The emotions can make school-life a success or a failure regardless of the intellect.
2. **There needs to be a partnership between emotions and the intellec**t. Emotions can support and they can hinder kinds of thinking we commonly

value and would like to foster. The aim must be to match, promote and maintain emotions which support the kind of thought we want students to practise.

3. **Partnerships need planning.** Teachers are often sensitive to moods and emotions and may respond to them in their teaching but they tend to respond in *ad hoc* ways, without forethought and a systematic approach which establishes a partnership between emotions and the intellect. There is a need to be proactive so that lesson planning includes both thought about the intellect, the moods and emotions which foster them, the emotional tendencies of the class, and the strategies which will be used to manage moods and emotions.
4. **Teachers and students work in an emotional climate.** The shared and general emotional tone in the classroom sets the tone for a lesson and, ideally, should match the needs of the thought to be practised.
5. **There is a stream of emotions when students engage with thinking tasks.** Moods and emotions while working on tasks of some duration are likely to change according to progress. When progress is promising, emotions are likely to be positive, indicating all is well. When progress founders, a growing feeling of unease prompts a change of approach. These stop-go signals are useful, if students respond to them.
6. **There can be tensions in the stream of emotions.** Purposeful thought in the classroom is often complex. In creative thinking, for instance, there is idea generation and idea evaluation. The former is likely to benefit from positive moods while the latter is likely to be better in a composed, calm frame of mind. If cold evaluation takes place too soon, it may terminate idea generation; if an overly happy mood extends into evaluation, it is likely to lack rigour.
7. **Teaching, thinking and learning is emotional labour.** Monsieur le Curé's ideas for alternative employment in Joanne Harris's book clearly make different emotional demands. Carpentry and gardening have their frustrations and pleasures but teaching involves dealing with matters of personal consequence, not just for students, but also for the teacher. At times, it is often demanding and can be stressful. Teachers need to be able to handle emotional labour.
8. **Students should increasingly learn to manage their own emotion-cognition interaction.** This takes some of the burden of emotional labour from the teacher and also equips the students for adult life. Increasing students' understanding that emotions matter is a start; exemplification and modelling by the teacher add to it.
9. **Moderation in all things.** The advice of the Delphic Oracle is wise, especially when it comes to managing moods and emotions. Some emotions do not interfere with thought or are fleeting and change spontaneously as the student settles to the task. Over-managed emotions may make the classroom climate worse.
10. **The elephant in the classroom.** Students' moods and emotions matter a lot and materially affect their academic achievement and personal well-being. In spite of that, they are left to chance while a great deal of thought goes into exercising the intellect in the expectation that it can be free of the 'undisciplined squads' in which it is embedded. We all know the elephant is in the classroom but we try to ignore it. It is, however, very strong and wilful.

If the interaction between the emotional and the intellectual systems is to be negotiated to produce a supportive partnership and classroom climate, then there must be some thought about how to bring this about. There are many strategies for managing the intellectual processes but fewer for emotional effects, at least those which are acceptable in a classroom. Some will be illustrated.

The most important implication for practice in the classroom is that teaching is likely to be more effective if planning and preparation reflect the interaction of emotions and cognition. For instance, a teacher planning to use emotions likely to motivate engagement with a topic might decide to use cognitive dissonance. This is where the student is shown something which does not conform to expectations. For example, in an elementary science lesson on floating and sinking, the teacher asks the students to predict what will happen to a stone (a piece of pumice) when it is dropped in water. The students are usually surprised when they see it float and, in trying to make sense of it, they extend their understanding. This is an example of a strategy which adjusts and uses emotions and also stimulates the intellect. Another teacher, planning a social studies lesson, looks for ways of relating the topic to matters of personal consequence for the students. Elsewhere, a modern foreign language class has several students who become tongue-tied when expected to respond in the target language. The teacher plans to lower his expectation regarding correct grammar in oral work and have the students play games in small groups using the target language, approaches known to lower anxieties associated with communication in a foreign language (Anuncion, 2010; Varga & Stulrajterova, 2008; Young 1991). An art teacher, having already selected motivating material, recalled that her class tended to see her lessons as light relief from what had gone before and behaved accordingly. The activity would call upon the students to compare paintings and reflect critically on them, something which would not benefit from overly frivolous frames of mind. She planned to begin, therefore, with a quiet, calming activity in which students reflected alone on a peaceful scene in a picture and silently compiled a list of five words which captured its essence. Another teacher planned for his class to examine some ambiguous historical evidence and arrive at a plausible explanation of events. He knew that he had a tendency to give the students a lot to do and then watch the clock, reminding them how little time there was to complete the task. Knowing that this stress can get in the way of understanding and creative thinking, particularly when the task is difficult, he planned to allow some motivating autonomy in how the task was done and let it be completed later, if necessary. Above all, he resolved to appear more relaxed and curb his clock-watching for work of this kind. Meanwhile, a teacher of younger children wanted to confront them with a dilemma using a story. She chose *Amy's Goose* by E. Holmes, in which a wild goose in nursed to health: the children must decide whether Amy should release the goose she has come to love or keep it captive.

After the planning comes the teaching. Emotional labour can be very demanding with some classes and teachers' emotional systems tell them so with a sinking feeling as the lesson approaches. But, broadly speaking, the demands are fairly predictable and planning strategies, even simple ones, can help a lot. Relying on impromptu responses can be stressful and inadequate. One class always arrived in a very boisterous mood, hardly conducive to productive thinking in mathematics. The teacher began the process of moderating the mood outside the classroom by taking a position where she could be seen, raising her arm and when the students looked at her, checking their

presence by calling names from a class list. Inside the room, she continued to reduce the affective tone by example – moods are contagious. She knew she had a tendency to try to amuse students with some witty comment but she showed restraint. In time, her students saw it as the normal affective climate for these lessons although, at times, she would vary it to suit the needs of the task. Sometimes, a mood may need to be adjusted in the other direction. After a long and tedious day, it was to end with a music lesson. The task was to create a new ringtone for a mobile phone (Kokotsaki & Newton, 2014). The teacher felt the need to lift the mood so she had the class leave their seats and 'tidy the room' for the end of the day. It took only five minutes but the exercise helped to pick up the mood. She then had the class listen to some short pieces of music, ostensibly as examples, to lift the tone further. After that, she presented the task and the students worked in pairs quite productively. The stream of affect led to a decline in mood later so she stopped at that point and had the students evaluate their ringtones. In effect, the teacher adjusted the mood to suit the task and then adjusted the task to suit the mood, both events being productive. The teacher who used cognitive dissonance found that one group of students had become frustrated with their failure to explain the floating of the stone and was ready to give up and drift off task. He explained that feeling frustrated was the mind's way of telling them they needed another approach. Showing enthusiasm, another emotion which is contagious, he helped them find that approach. Although these were responses to events within a lesson, they are the result of thought and planning which adds to a teacher's repertoire. Noting the need for that thought and planning can come at leisure, after the lesson.

After such lessons, it is normal to reflect on the effectiveness of the strategy for exercising the intellect. But it is also worth allowing a few minutes to reflect on the emotional climate, noting where it worked well and where it could have been better. This informs the next round of planning.

The point of these examples is to show that making provision for an emotion-intellect partnership need not be difficult but it does need to be conscious. It is also an aspect of teaching where teachers, knowing their students as they do, can make a very useful contribution to their own skills by devising strategies themselves and passing the ideas on to others.

Postscript

The ways in which the emotional system and the intellectual system interact are wide ranging and often complex. This short article offers only a taste of the subject and cannot do justice to its breadth and, at times, its complexity. Furthermore, thought is affected by more than the intellect and the emotions but, even with a brief account, it is possible to see that pedagogies of learning need to be widened to include more than the intellect. Readers who would like a fuller picture and one which also reflects on related issues should see Newton (2014)

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