

A return to the use of emotion and reflection

Helen Demetriou and Elaine Wilson call for a synthesis of affect and cognition in teaching

There can be no knowledge without emotion. We may be aware of a truth, yet until we have felt its force, it is not ours. To the cognition of the brain must be added the experience of the soul.

Arnold Bennett (1867–1931)

More often than not, teachers approach their first few months of teaching with gusto for the subject that inspired them to become teachers. This initial enthusiasm is also extended to the students they in turn want to inspire. Somewhere along the line many teachers realise that as well as sharing their knowledge, there is a need for affective communication with the student.

From early on our emotional development is inextricably intertwined with our acquisition of knowledge. Psychological research has revealed similarities between human cognitive and emotional processes. Such attempts to build bridges between the domains of social and cognitive development have resulted in a direct behavioural link between cognition and emotion in that our thoughts affect the way we feel about stimuli and vice versa. Whereas cognition acts, affect energises, so that the understanding of another's feelings, for example, may be motivated by our own affective responses to them.

Yet despite these obvious links, effective teaching and constructive learning are often regarded solely as cognitive processes. There is often little regard given to the feeling and emotional aspects of teaching and learning. We begin by looking at the roles played independently by affect and cognition within learning, and also the ways in which they compound learning when they are brought together.

Affect and learning

Affect, like the adjective affective, refers to the experience of feeling or

emotion. Piaget (1981) noted: 'The term, affectivity includes feelings, properly so-called, as well as the various drives or tendencies including 'higher tendencies' such as the will' (p.2). Dewey (1895, 1916) originally propounded the social conditions for learning, emphasising the importance of 'sharing in each other's activities and in each other's experiences because they have common ends and purposes'. Others have regarded affect as a crucial component for learning in the classroom. In keeping with Carl Rogers (1951), who believed that personal growth is tied to the evident support of a caring person, Nell Noddings (1992) has advocated the need for caring teachers.

Putting such theories into practice, Gazda and colleagues developed Human Relations Training in the 1980s so that teachers could interact effectively with students in order to guide them in a positive learning direction (Gazda et al., 2005). Goleman (1996) considered students' EQ (emotional quotient) to be as important as their IQ, and especially when confronted with breakdowns in classroom communication, using programmes designed to teach students how to resolve conflict, deal with emotions, and argue effectively. Others have linked student motivation directly to affect (e.g. McCombs & Whisler, 1997); and through designing and refining courses and assessing curricula, Diamond (1989) introduced the importance of the affective component of classroom interactions.

Cognition and learning

Cognition can be defined as 'the mental acquisition of knowledge through thought, experience, and the senses' (*Oxford English Dictionary*, 2005). Reflection is a cognitive process that helps teachers to gain insights into the 'big picture' and rethink their practice, learn from their experiences and help them to cope with similar situations in the future. Fullan (1993, 1999) argued that it is only through reflection at the

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personal, group and organisational levels that teachers will begin to question their practice and think differently about teaching and learning.

Such notions of reflection originated in the writings of John Dewey as a way of thinking about a problematic situation that needs to be resolved, as 'the function of reflective thought is, therefore, to transform a situation in which there is experienced obscurity, doubt, conflict, disturbance of some sort, into a situation that is clear, coherent, settled, harmonious' (Dewey, 1933). Reflection, as described by McIntyre (1993), is a primary means for teachers to sustain learning throughout their careers. Much of the practice of experienced teachers is automated or intuitive, shaped by understandings that are not usually articulated. Therefore, learning is dependent on bringing to consciousness and examining the assumptions and values behind their actions as teachers; arguably, without reflection, teachers cannot modify their practice in a controlled or deliberate way.

The synthesis of affect and cognition

The interaction between affect and cognition is not dissimilar to social cognition, which attempts 'to understand and explain how the thoughts, feelings, and behaviour of individuals are influenced by the actual, imagined, or implied presence of others' (Allport, 1985, p.3). It studies the individual within a social or cultural context and focuses on how people perceive and interpret information they generate themselves (intrapersonal) and from others (interpersonal) (Sternberg, 1994).

In the field of developmental psychology, Piaget (1981) used metaphor to encapsulate the interaction of affect and cognition: 'affectivity would play the role of an energy source on which the functioning but not the structures of intelligence would depend. It would be the gasoline, which activates the motor

of an automobile but does not modify its structure' (p.5).

Benjamin Bloom (1981) developed a taxonomy of the affective domain, which attempts to describe how individuals' affective reactions are the basis for cognitive shifts, and notes also that cognition can trigger affective reactions. Zembylas (2002) showed that the emotions of science teachers influenced how they organised their curriculum and teaching. He claimed that teachers' emotional experiences and their reflection about their emotions are inextricably linked to their pedagogy.

Baird et al. (2007) investigated the balance between affect and cognition in teaching with 33 teachers and over 2000 students from six schools by examining how various features in the classroom context influenced teaching and learning. Their findings revealed the importance of a balance between affect and cognition for effective teaching and learning. Rather than purely trying to communicate the facts in a rote fashion, teachers who incorporated more emotion and expression in their teaching, thereby making it more interesting and enticing, were more successful in communicating the subject matter and keeping students engaged. Moreover, the affective means by which teachers communicated their subject resulted in students becoming more interested in the subject and consequently more successful at it.

Perhaps this success stems from continued engagement. Logan and Skamp (2008) took a longitudinal qualitative approach to find out why children's interest in science declines with age. The study traced 20 students over the course of two years and revealed the importance of the teacher's pedagogical approach and classroom environment in determining the extent to which students were

engaged in the subject. Moreover, and not unrelated to this finding, the importance of listening to and heeding the student's voice emerged as a crucial factor in addressing the decline in students' attitudes and interest in science.

A study by Gulnar (2003) examined science teachers' use of affect and cognition. Having observed and interviewed a physics teacher and a chemistry teacher, the physics teacher used significantly more instructional strategies, varied his strategies and was more metacognitive about his instruction than the chemistry teacher. Realising that his students were below his expectations, the physics teacher slowed down his

instruction and used more repetition. Unlike the less successful chemistry teacher, who became upset, angry and discouraged, and consequently made little headway, the physics teacher believed in building healthy, empathic relationships with his students.

Our own research (Wilson & Demetriou, 2008) is based on data taken from interviews with secondary school science teachers in their first years of teaching. The results emphasise the importance of conceptualising teaching and learning as encompassing both affect and cognition in order to have a balanced and healthy view of teaching, learning, the student and the school. Many of the teachers we spoke to emphasised the importance of establishing a rapport with their students, and especially when they were disengaged and uninterested in learning. One teacher talked at length about the boundaries that she felt were permissible between herself and her students. She realised that, in doing so, she was able to engage the students more effectively:

When I was at school, I had good relationships with my teachers and I realise that I needed that. But my best friend didn't – she felt awkward. So I leave it up to the students to see what they need from me. I feel that

I can trust them and tell them things and build a relationship that way. Being more social with them helps establish a rapport and helps with teaching. One girl really didn't want to do a task but when I asked her again, she said: 'Because it's you, Miss, I will do it.' It's significant that if they need to do something that is boring they will do it because it is you. That felt nice.

"Much of the practice of experienced teachers is automated or intuitive"

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This teacher also spoke about the route she took to engage an unmotivated student:

I have a bottom set year 11 group. They are not interested in science. I have a girl who wants to dance and I show an interest. ...it's not that I'm not interested in my subject – but I think that I can get through to my students through building a relationship...one girl has been showing me a baby outfit she's been designing in textiles. And she wanted to show it to me so she can show something that is good. And you start the relationship by showing an interest. I ask: 'How is that coming along/what colour will that be/is it finished yet...?' So you have an inlet...And I don't know how I've done it, but just by being interested in things like that, they can talk to me. I go over the top sometimes. The girl has a fluffy pens or is wearing glitter: 'That's beautiful, that's gorgeous – wow!!' Just be really energetic and positive about things and that makes you more approachable, you're not going to be cross and you're there to help. It's saying 'Come to me and ask

me, that's what I'm here for'. Hopefully once one or two are on board the rest of their group will realise it also.

Another teacher felt immensely proud that in her two short years of teaching, she had changed her students' perceptions of science for the better:

I've got one year 7 group that is weak, and at parents' evening recently the parents were absolutely lovely. They said: 'Thank you so much, they really hated science and they really enjoy it this year.' And I've had some year 10s whose parents said that I changed their perception of science and they love it now.

By the time teachers had reached the end of their second year of teaching, many had realised that teaching needed to be people-directed, with less emphasis on the subject and more on the students themselves. In so doing, teachers felt that they were able to communicate more effectively with their students and thereby disseminate the subject knowledge more successfully; as reported by a recently qualified male teacher:

I've become less interested in science

and more interested in learning and people... As [my PGCE tutor] said, 'We teach children, not chemistry', and I suppose I'm fitting more and more into that. And science is a vehicle...and they are all means to the same end, which is developing children.

All too often, teachers ignore or underestimate the emotional component of teaching, to the detriment of both teaching and learning. Following on from Dewey's belief that successful teaching and learning is the result of an integration of emotion and cognition, it is increasingly evident that we need to focus on both of these factors in order to sustain healthy and progressive teaching environments and to ensure that the years of training undergone by teachers are put to good use, so that there is a balanced and healthy view of teaching, learning, the student and the school.

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