Affective Dynamics within Students’ Scientific Inquiry

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Most accounts of affect and motivation in the science education literature have discussed them as relevant to, but distinct from, disciplinary pursuits (e.g., Pintrich, 1999, 2003; Pintrich & De Groot, 1990; Pintrich, Marx, & Boyle, 1993). Similarly, while accounts of students’ scientific inquiry often include descriptions of affect as tacit or explicit evidence of students’ engagement (e.g. Engle & Conant, 2002; Warren et al., 2001; Hammer & van Zee, 2006), it is affect with respect to the disciplinary substance, which is considered in terms of concepts and epistemologies. We present a case study to illustrate the entanglement of affect within disciplinary engagement, using data from a middle school class discussing clouds.

We argue that students’ experiences within inquiry—of discovery or puzzlement, conviction or disagreement—are and must be rich in affective dynamics. Having a question, for example, comes with a sense of unease, and that feeling is part of the experience of a question; that feeling may be the first conscious signal that something is amiss. Similarly, having an idea comes with a feeling of excitement. Part of what they are learning is how these moments feel, as part of understanding them, and eventually as part of how they understand what it means to engage in science.

References


